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# United States Department of Agriculture,

## FOREST SERVICE,

GIFFORD PINCHOT, Forester.

### FIELD PROGRAMME FOR JANUARY, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are indefinite and reference to projects for which plans have not been matured are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

Work conducted under the direction of the Forester is designated (F); Dendrology (D); Forest Management (M); Forest Products (P); Forest Extension (E); Forest Reserves (R).

#### ADMINISTRATION.

GIFFORD PINCHOT, *Forester.*

OVERTON W. PRICE, *Associate Forester.*

F. E. OLMSTED, *Assistant Forester in charge of Inspection.*

✓ GEO. B. SUDWORTH, *Chief of Dendrology.*

✓ T. H. SHERRARD, *Chief of Forest Management.*

WILLIAM L. HALL, *Chief of Forest Products.*

E. A. STERLING, *Chief of Forest Extension.*

R. E. BENEDICT, *Acting Chief of Section of Forest Reserves.*

JAMES B. ADAMS, *Chief of Records and Special Fiscal Agent.*

#### FIELD WORK.

##### ALABAMA.

✓ (M) Study of red cedar—L. L. WHITE, Demopolis, Ala.

##### ARIZONA.

(E) Establishment of forest nurseries in the San Francisco Mountains Forest Reserve—W. B. HADLEY, Flagstaff, Ariz.

##### CALIFORNIA.

✓ (D) New and little-known eucalypts for the United States—Prof. A. J. MCCLATCHIE; permanent address, Rur. Del., Sta. L, Los Angeles, Cal.

✓ (D) Study of tanbark oaks of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley, Cal.

✓ (D) Special studies of California trees, four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY; permanent address, Stanford University, Cal.

✓ (D) Study of native and exotic acacias—Prof. A. V. STUBENRAUCH; permanent address, Berkeley, Cal.

✓ (M) Inspection of timber cutting on forest reserves—W. B. GREELEY, 180 Perry street, Oakland, Cal.

✓ (M) Study of the white fir—P. D. KELLETER, Occidental Hotel, San Francisco, Cal.

✓ (M) Working plans for portions of the Sierra Forest Reserve—M. B. PRATT, Glennville, Cal.; assistants, C. J. BUCK and J. REBMANN.

✓ (M) Examination of proposed cuttings, Santa Barbara Forest Reserve—P. T. HARRIS, Stauffer, Cal.; assistants, W. B. PIPER, W. G. DURBIN, H. L. TUCKER, and I. F. ELDREDGE.

(M) Examination of timber in the Santa Barbara Forest Reserve—F. G. PLUMMER, care W. B. GREELEY, 180 Perry street, Oakland, Cal.

(E) Study of State forest lands, in cooperation with the State—S. J. FLINTHAM, Capitol Hotel, Sacramento, Cal.

(E) Preparation of planting plans, in cooperation with landowners—G. B. LULL, Hotel Lillie, Los Angeles, Cal.; assistant, H. O. STABLER.

(E) Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, B. R. H. D'ALLEMAND, Santa Barbara, Cal.

(E) Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, A. T. SEARLE.

(P) Tests of the strength of eucalyptus wood, in cooperation with University of California—L. E. HUNT, Berkeley, Cal.; assistant, A. J. CLEARY.

(P) Experiments in preservative treatment of fence posts—R. W. AYRES, Hotel Lillie, Los Angeles, Cal.; assistant, A. H. PIERSON.

(P) Experiments in seasoning and treating telephone and other poles for electric wires in cooperation with electric companies in southern California—W. R. WHEATON, Hotel Lillie, Los Angeles, Cal.

(R) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Hotel Hollenbeck, Los Angeles, Cal.

#### COLORADO.

(E) Study to determine the best methods of improving the forest cover on watersheds of Denver and Colorado Springs—F. W. BESLEY, Colorado Springs, Colo.

#### CONNECTICUT.

(P) Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven, Conn.; assistant, CORNELIUS BARRY.

(P) Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven, Conn.

#### DISTRICT OF COLUMBIA.

(P) Plans for timber treating and testing laboratory in Washington, D. C.—C. G. CRAWFORD and S. M. ROWE, Washington, D. C.

#### FLORIDA.

✓ (D) Improved methods of turpentineing, experimental pine forests in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs, Fla.

✓ (M) Preliminary examination of timberlands, in cooperation with landowners—K. W. WOODWARD, Jacksonville, Fla.

#### HAWAII.

(E) Examination of lands for insular forest reserves—R. S. HOSMER, Honolulu, Hawaii.

#### INDIANA.

(P) Timber testing at Lafayette, Ind., in cooperation with Purdue University—Dr. W. K. HATT, Lafayette, Ind.; assistants, H. D. HARTLEY, O. P. M. GOSS, and T. A. NEWLIN.

#### MAINE.

✓ (M) Study of popple—W. G. WEIGLE, Portland, Me.

#### MARYLAND.

(P) Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton, Md.

#### MASSACHUSETTS.

✓ (M) Woodlot and timber-tract examinations, in cooperation with the State—ALFRED AKERMAN, State Forester, Boston, Mass.

(P) Experiments to determine the value of various woods for pulp—A. D. LITTLE and H. S. BRISTOL, 93 Broad street, Boston, Mass.



## MICHIGAN.

(P) Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and Wisconsin Central railroad companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba, Mich.; assistant, C. S. SMITH.

## MISSISSIPPI.

(E) Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College, Miss.

## NEBRASKA.

(E) Care of Government nursery, Dismal River Forest Reserve—C. A. SCOTT, in Charge, Halsey, Nebr.; assistant, W. H. MAST.

Lecture work, University of Nebraska, Lincoln, Nebr.—C. A. SCOTT.

## NEVADA.

(R) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistants, R. B. WILSON and J. B. LEIBERG.

## NEW HAMPSHIRE.

✓ (M) Study of woodlot and forest conditions in southern New Hampshire, in cooperation with the State—C. A. LYFORD, Cheshire House, Keene, N. H.; assistants, A. T. BOISEN, H. C. NEEL, and B. MACKAYE.

✓ (M) Mill scale study of second-growth white pine—L. MARGOLIN, South Sutton, N. H.; assistant, W. C. WICKHAM.

## NEW MEXICO.

(E) Care of Government forest nursery, and preparation of planting plan for portions of the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard, N. Mex.; assistant, A. S. PECK.

(R) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistants, R. V. R. REYNOLDS and J. B. LEIBERG.

## OREGON.

(P) Tests of red fir, in cooperation with University of Oregon—J. F. KNAPP, Eugene, Oreg.

## SOUTH CAROLINA.

✓ (M) Working plan for E. P. Burton Lumber Company, in cooperation with the company—H. G. MERRILL, Legare, S. C.; assistants, F. M. PATTON, W. C. LATANE, JR., J. A. FITZWATER, R. G. MURDOCK, W. O. DAVIS, and C. E. DUNSTON.

(P) Tests of loblolly pine at mill of the E. P. Burton Lumber Company—H. S. BETTS, P. O. Box 494, Charleston, S. C.; assistant, M. CLINE.

## TEXAS.

✓ (D) Study of forest conditions of the Big Thicket country—Prof. W. L. BRAY; permanent address, Austin, Tex.

## UTAH.

(R) Examination of land for new forest reserves—CLYDE LEAVITT, Richfield, Utah.

## VIRGINIA.

(P) Experiments in grading and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, Norfolk, Va.

✓ (M) Study of the Potomac River watershed—W. W. ASHE, Glade Springs, Va.

## WASHINGTON.

(P) Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle, Wash.

(P) Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the

Northern Pacific Railway Company—H. B. EASTMAN, 117 South G street, Tacoma, Wash.

#### WYOMING.

(M) Examination of proposed cuttings, Yellowstone Forest Reserve—I. T. WORTHLEY, Wapiti, Wyo.

### REGIONAL STUDIES.

#### EASTERN STATES.

(M) Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

(E) Study of forest plantations—R. C. BRYANT, Washington, D. C.

#### MIDDLE WESTERN STATES.

(M) Woodlot examinations, in cooperation with landowners—W. BRADFELD, Washington, D. C.

#### WESTERN STATES.

(M) Inspection of timber cutting on forest reserves in the Southwest—E. E. CARTER, Guam, N. Mex.

### GENERAL STUDIES.

(P) Collection of statistics of forest products for year 1905—R. S. KELLOGG, Washington, D. C.; GEO. K. SMITH, Equitable Building, St. Louis, Mo.

(P) Study of woods used in the cooperage industry—J. J. LEVISON and H. M. HALE, Washington, D. C.

(P) Study of woods used in the vehicle and implement industry—H. B. HOLROYD, Washington, D. C.

(P) Study of woods used for street paving—C. L. HILL, Washington, D. C.

(P) Study of woods used for box and basket purposes—J. P. WENTLING, Washington, D. C.

(P) Study of methods of kiln drying—FREDERICK DUNLAP, Washington, D. C.

(P) Study of methods of wood distillation—THOMAS W. PRITCHARD, Washington, D. C.

### FOREST RESERVES.

#### INSPECTION.

E. T. ALLEN, *Forest Inspector*, Sacramento, Cal.

E. S. BRUCE, *Forest Inspector*, Deadwood, S. Dak.

SMITH RILEY, *Forest Inspector*, Glenwood Springs, Colo.

ELERS KOCH, *Forest Inspector*, Bozeman, Mont.

D. D. BRONSON, *Forest Inspector*, Hotel Oregon, Portland, Oreg.

J. H. HATTON, *Forest Inspector*, Sacramento, Cal.

D. B. SELLER, *Forest Superintendent*, Tacoma, Wash.

#### ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

#### ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; W. L. LA FOUNTAIN, Assistant Forest Inspector, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise, Ariz.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Ranger in Charge, Prescott, Ariz.



San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Globe, Ariz.; W. W. CLARK, Forest Assistant, Globe, Ariz.

#### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. P. L. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Lake Tahoe Forest Reserve—S. L. N. ELLIS, Forest Ranger in Charge, Sonora, Cal.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Modoc Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve (Western Division)—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTON, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Ranger in Charge, Sonora, Cal.; JOHN C. WELLS, Forest Ranger, Bridgeport, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—R. P. L. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

#### COLORADO.

Battlement Mesa Forest Reserve—A. R. CRAIG, Forest Supervisor, Mesa, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.; W. J. MORRILL, Forest Assistant, Moffatt, Colo.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Mesa, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Holy Cross Forest Reserve—SHEP. N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.; F. A. SILCOX, Forest Assistant, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—JAMES H. CLARKE, Forest Supervisor, Denver, Colo.; G. E. CLEMENT, Forest Assistant, Denver, Colo.; W. D. EDMONSTON, Forest Ranger, Larkspur, Colo.

San Isabel Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.; W. J. MORRILL, Forest Assistant, Moffatt, Colo.

Wet Mountains Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.; W. J. MORRILL, Forest Assistant, Moffatt, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henry's Lake Forest Reserve—HOMER FENN, Forest Ranger in Charge, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho; M. L. ERICKSON, Forest Assistant, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Priest River, Idaho; L. VON WERNSTEDT, Forest Agent, Williams, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho; M. L. ERICKSON, Forest Assistant, Boise, Idaho.

Weiser Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho; M. L. ERICKSON, Forest Assistant, Boise, Idaho.

#### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. McKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMPKINS, Forest Agent, Cass Lake, Minn.

#### MONTANA.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Hamilton, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Boulder, Mont.

Gallatin Forest Reserve—MICHAEL LANGOHR, Forest Supervisor, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Ovando, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Toney, Mont.

#### NEW MEXICO.

Gila Forest Reserve—R. C. McCLURE, Forest Supervisor, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Lincoln Forest Reserve—CLEMENT HIGHTOWER, Forest Supervisor, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Ranger in Charge, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.

#### OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.

#### OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Baker City Forest Reserve—S. S. TERRELL, Forest Supervisor, Sumpter, Oreg.



Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Ranger in Charge, Prineville, Oreg.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—SETH BULLOCK, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.; JOHN F. SMITH, Forest Ranger, Custer, S. Dak.; E. M. HAMILTON, Assistant Forest Inspector, Rochford, S. Dak.

Cave Hills Forest Reserve—SETH BULLOCK, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—SETH BULLOCK, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—SETH BULLOCK, Forest Supervisor, Deadwood, S. Dak.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

Logan Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Ranger in Charge, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah; J. H. RAMSKILL, Forest Assistant, Parowan, Utah.

Uintah Forest Reserve—D. S. MARSHALL, Forest Supervisor, Kamas, Utah.

#### WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; S. G. SMITH, Forest Assistant, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspoint, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

#### WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn, Wyo.; JOHN MUSSELL, Scaler, Bighorn, Wyo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Pinedale, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY W. THURSTON, Forest Ranger, Marquette, Wyo.

## SERVICE CHANGES IN DECEMBER.

### APPOINTED.

HAROLD A. E. MARSHALL, Forest Ranger, \$1,400 per annum; assigned to Pinal Mountains Forest Reserve as Forest Ranger in Charge.

H. W. PORTER, Stenographer and Typewriter, \$900 per annum; assigned to Section of Files, Stenography, and Typewriting.

F. E. BECHTOLD, Stenographer and Typewriter, \$900 per annum; assigned to Section of Files, Stenography, and Typewriting.

C. I. PARKER, Typewriter, \$900 per annum; assigned to Section of Supplies.

D. C. BOLLAND, Draftsman, \$900 per annum; assigned to Section of Forest Maps.

ALBERT RUPPEL, Stenographer and Typewriter, \$720 per annum; assigned to Section of Files, Stenography, and Typewriting.

GEORGE L. HOFFMAN, Messenger, \$360 per annum.

The following persons were appointed Assistant Forest Rangers at \$900 per annum, having been certified by the Civil Service Commission:

A. T. ERNO, Klamath Forest Reserve, California.

C. J. QUIGLEY, Shasta Forest Reserve, California.

JOHN S. REED, Trinity Forest Reserve, California.

J. W. ADAMSON, Sawtooth Forest Reserve, Idaho.

GEO. E. HOYT, Hell Gate Forest Reserve, Montana.

AUSBURN H. DOUGLASS and CHARLES M. WYNANT, Gila River Forest Reserve, New Mexico.

J. H. KINNEY, Lincoln Forest Reserve, New Mexico.

OTTO P. GREEN, Wenaha Forest Reserve, Oregon.

WILLIAM HURST, Dixie Forest Reserve, Utah.

TIMOTHY C. HOYT, Dixie Forest Reserve, Utah.

THOMAS E. CHIDSEY, Wallowa Forest Reserve, Oregon.

### PROMOTED.

PAGE S. BUNKER, Forest Ranger, \$1,080 to \$1,200 per annum; assigned to Southern Division of Lewis and Clark Forest Reserve as Forest Ranger in Charge; promotion made on record as Forest Ranger, and in view of increased responsibility.

WILLIAM R. KREUTZER, Forest Ranger, assigned to Gunnison Forest Reserve as Forest Ranger in Charge; promotion made on record as Forest Ranger.

D. D. BRONSON, Forest Assistant to Forest Inspector; assigned to Northern Division of Cascade Forest Reserve as Forest Inspector in Charge; promotion made on record as Forest Assistant.

C. H. ROWDEN, Stenographer and Typewriter, \$900 to \$1,000 per annum, in charge of Section of Stenography and Typewriting; promotion made to fill vacancy on statutory roll, and on record for efficiency.

Miss E. L. PRICE, Stenographer and Typewriter, \$800 to \$900 per annum; promotion made to fill vacancy on statutory roll, and on record for efficiency.

Miss M. M. CHILDS, Stenographer and Typewriter, \$720 to \$800 per annum; promotion made to fill vacancy on statutory roll, and on record for efficiency.

Miss M. V. CUNNINGHAM, Clerk, \$600 to \$720 per annum; promotion made to fill vacancy on statutory roll, and on record for efficiency.

Miss M. T. MILLER, Stenographer and Typewriter, \$480 to \$600 per annum; promotion made to fill vacancy on statutory roll, and on record for efficiency.

### RESIGNATION ACCEPTED.

A. M. BLISS, Forest Supervisor, Southern Division, Lewis and Clark Forest Reserve, Montana.

ADOLPH ASCHOFF, Forest Supervisor, Northern Division, Cascade Forest Reserve, Oregon.

### RESIGNED FROM THE SERVICE.

C. H. SELLERS, Forest Student.

R. B. HANDY, JR., Clerk.

Mrs. M. B. KNAPP, Clerk.

Mrs. H. M. CURRAN, Clerk.



# United States Department of Agriculture,

## FOREST SERVICE,

GIFFORD PINCHOT, Forester.

### FIELD PROGRAMME FOR FEBRUARY, 1906.

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Work conducted under the direction of the Forester is designated (F); Dendrology (D); Forest Management (M); Forest Products (P); Forest Extension (E); Forest Reserves (R).

#### ADMINISTRATION.

GIFFORD PINCHOT, *Forester.*

OVERTON W. PRICE, *Associate Forester.*

F. E. OLMSTED, *Assistant Forester in charge of Inspection.*

GEO. B. SUDWORTH, *Chief of Dendrology.*

T. H. SHERRARD, *Chief of Forest Management.*

WILLIAM L. HALL, *Chief of Forest Products.*

E. A. STERLING, *Chief of Forest Extension.*

R. E. BENEDICT, *Acting Chief of Section of Forest Reserves.*

JAMES B. ADAMS, *Chief of Records and Special Fiscal Agent.*

#### FIELD WORK.

##### ALABAMA.

(M) Study of red cedar—L. L. WHITE, Demopolis, Ala.

##### ARIZONA.

(R) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters, Hotel Hollenbeck, Los Angeles, Cal.; assistant, CLYDE LEAVITT.

##### CALIFORNIA.

(D) New and little-known eucalypts for the United States—Prof. A. J. MCCLATCHIE; permanent address, Rur. Del., Sta. L, Los Angeles, Cal.

(D) Study of tanbark oaks of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley, Cal.

(D) Special studies of California trees, four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY; permanent address, Stanford University, Cal.

(M) Inspection of timber cutting on forest reserves—W. B. GREELEY, 180 Perry street, Oakland, Cal.

(M) Market study of commercial species—P. D. KELLETER, Occidental Hotel, San Francisco, Cal.; assistants, M. B. PRATT and C. J. BUCK.

(M) Examination of proposed cuttings, Santa Barbara Forest Reserve—P. T. HARRIS, Stauffer, Cal.; assistants, W. B. PIPER, J. REBMANN, W. G. DURBIN, H. L. TUCKER, and I. F. ELDREDGE.

(M) Examination of timber in the Santa Barbara Forest Reserve—F. G. PLUMMER, care W. B. GREELEY, 180 Perry street, Oakland, Cal.

(E) Study of planted timber and of State forest lands, in cooperation with the State—S. J. FLINTHAM, Occidental Hotel, San Francisco, Cal.

(E) Preparation of planting plans, in cooperation with landowners—G. B. LULL, Hotel Lillie, Los Angeles, Cal.; assistant, H. O. STABLER.

(E) Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, B. R. H. D'ALLEMAND, Santa Barbara, Cal.

(E) Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena, Cal.

(P) Tests of the strength of eucalyptus wood, in cooperation with University of California—L. E. HUNT, Berkeley, Cal.; assistant, A. J. CLEARY.

(P) Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in southern California—W. R. WHEATON, Hotel Lillie, Los Angeles, Cal.

(R) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Hotel Hollenbeck, Los Angeles, Cal.; assistants, CLYDE LEAVITT, S. G. SMITH, L. VON WERNSTED, and WALTER J. MOSENTHAL.

#### COLORADO.

(E) Study of forest conditions on watersheds of several cities in Colorado—F. W. BESLEY, Colorado Springs, Colo.

#### CONNECTICUT.

(P) Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven, Conn.; assistants, M. CLINE and CORNELIUS BARRY.

(P) Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven, Conn.

#### DISTRICT OF COLUMBIA.

(P) Plans for timber treating and testing laboratory in Washington, D. C.—C. G. CRAWFORD and S. M. ROWE, Washington, D. C.

#### FLORIDA.

(D) Improved methods of turpentining, experimental pine forests, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs, Fla.

(M) Preliminary examination of timberlands, in cooperation with landowners—A. B. PATTERSON, Fort Myers, Fla.

#### HAWAII.

(E) Examination of lands for insular forest reserves—R. S. HOSMER, Honolulu, Hawaii.

#### INDIANA.

(P) Timber testing at Lafayette, Ind., in cooperation with Purdue University—Dr. W. K. HATT, Lafayette, Ind.; assistants, H. D. HARTLEY, O. P. M. GOSS, and T. A. NEWLIN.

#### MARYLAND.

(M) Study of Potomac River watershed—W. W. ASHE, Hancock, Md.

(P) Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton, Md.

#### MASSACHUSETTS.

(M) Woodlot and timber-tract examinations, in cooperation with the State—ALFRED AKERMAN, State Forester, Boston, Mass.

(P) Experiments to determine the value of various woods for pulp—A. D. LITTLE and H. S. BRISTOL, 93 Broad street, Boston, Mass.



## MICHIGAN.

(P) Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and Wisconsin Central railroad companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba, Mich.; assistant, C. S. SMITH.

## MISSISSIPPI.

(E) Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College, Miss.

## NEBRASKA.

(E) Care of Government nursery, Dismal River Forest Reserve—C. A. SCOTT, Halsey, Nebr.; assistant, W. H. MAST.

## NEVADA.

(R) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistants, R. B. WILSON, S. G. SMITH, and L. VON WERNSTED.

## NEW HAMPSHIRE.

(M) Study of woodlot and forest conditions in southern New Hampshire, in cooperation with the State—C. A. LYFORD, Cheshire House, Keene, N. H.; assistants, A. T. BOISEN, H. C. NEEL, B. MACKAYE, and W. C. WICKHAM.

## NEW MEXICO.

(E) Nursery work and preparation of planting plans for portions of the Fort Bayard Military Reservation and Gila Forest Reserve—W. R. MATTOON, Fort Bayard, N. Mex.; assistants, A. S. PECK and W. B. HADLEY.

(P) Experiments in the preservative treatment of fence posts—A. H. PIERSON, Hotel Castaneda, Las Vegas, N. Mex.

(R) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistants, R. V. R. REYNOLDS and J. B. LEIBERG, El Paso, Tex.

## OREGON.

(P) Tests of the strength of red fir, in cooperation with University of Oregon—J. F. KNAPP, Eugene, Oreg.

## PENNSYLVANIA.

(E) Preliminary study, in cooperation with the Pennsylvania Railroad Company, to determine a forest policy for the company—R. C. BRYANT, Bingham House, Philadelphia, Pa.

## SOUTH CAROLINA.

(M) Working plan for E. P. Burton Lumber Company, in cooperation with the company—H. G. MERRILL, Longridge, S. C.; assistants, F. M. PATTON, W. C. LATANE, JR., J. A. FITZWATER, R. G. MURDOCK, W. O. DAVIS, and C. E. DUNSTON.

## TEXAS.

(D) Study of forest conditions of the Big Thicket country—Prof. W. L. BRAY; permanent address, Austin, Tex.

## VIRGINIA.

(P) Experiments in grading and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, Norfolk, Va.

## WASHINGTON.

(P) Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle, Wash.

(P) Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma, Wash.

## WYOMING.

(M) Examination of proposed timber sales, Yellowstone Forest Reserve—I. T. WORTHLEY, Wapiti, Wyo.

## REGIONAL STUDIES.

## EASTERN STATES.

(M) Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

## MIDDLE WESTERN STATES.

(M) Examination of woodlots and timber tracts, in cooperation with land-owners—S. J. RECORD, Crawfordsville, Ind.

## WESTERN STATES.

(M) Inspection of timber cutting on forest reserves in the Southwest—E. E. CARTER, Santa Fe, N. Mex.

## GENERAL STUDIES.

(P) Collection of statistics of forest products for year 1905—R. S. KELLOGG, Washington, D. C.; GEO. K. SMITH, Equitable Building, St. Louis, Mo.

(P) Study of woods used in the cooperage industry—J. J. LEVISON and H. M. HALE, Washington, D. C.

(P) Study of woods used in the vehicle and implement industry—H. B. HOLROYD, Washington, D. C.

(P) Study of woods used for street paving—C. L. HILL, Washington, D. C.

(P) Study of woods used for box and basket purposes—J. P. WENTLING, Washington, D. C.

(P) Study of methods of kiln drying—FREDERICK DUNLAP, Washington, D. C.

## FOREST RESERVES.

## INSPECTION.

E. T. ALLEN, *Forest Inspector*, Sacramento, Cal.

SMITH RILEY, *Forest Inspector*, Glenwood Springs, Colo.

ELERS KOCH, *Forest Inspector*, Montrose, Colo.

D. D. BRONSON, *Forest Inspector*, Hotel Oregon, Portland, Oreg.

J. H. HATTON, *Forest Inspector*, Sacramento, Cal.

D. B. SHELLER, *Forest Superintendent*, Sacramento, Cal.

COERT DU BOIS, *Forest Inspector*, El Paso, Tex.

W. T. COX, *Assistant Forest Inspector*, Tacoma, Wash.

## ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

## ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; W. L. LA FOUNTAIN, Assistant Forest Inspector, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise, Ariz.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Ranger in Charge, Prescott, Ariz.



San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Globe, Ariz.; W. W. CLARK, Forest Assistant, Globe, Ariz.

#### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Tahoe Forest Reserve—S. L. N. ELLIS, Forest Ranger in Charge, Sonora, Cal.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Modoc Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve (Western Division)—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTON, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Ranger in Charge, Sonora, Cal.; JOHN C. WELLS, Forest Ranger, Bridgeport, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

#### COLORADO.

Battlement Mesa Forest Reserve—A. R. CRAIG, Forest Supervisor, Mesa, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Holy Cross Forest Reserve—SHEP. N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.

Montezuma Forest Reserve—F. A. SILCOX, Forest Assistant in Charge, Durango, Colo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—JAMES H. CLARKE, Forest Supervisor, Denver, Colo.; G. E. CLEMENT, Forest Assistant, Denver, Colo.; W. D. EDMONSTON, Forest Ranger, Larkspur, Colo.

San Isabel Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

San Juan Forest Reserve—F. A. SILCOX, Forest Assistant in Charge, Durango, Colo.

Uncompahgre Forest Reserve—ELERS KOCH, Forest Inspector in Charge, Montrose, Colo.

Wet Mountains Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henry's Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Priest River, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Weiser Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

#### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. MCKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMPKINS and H. A. BLILER, Forest Agents, Cass Lake, Minn.

#### MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Gallatin Forest Reserve—MICHAEL LANGOHR, Forest Supervisor, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Oyando, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Tony, Mont.

#### NEW MEXICO.

Gila Forest Reserve—R. C. McCLURE, Forest Supervisor, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Jemez Forest Reserve—M. L. ERICKSON, Forest Assistant in Charge, Santa Fe, N. Mex.

Lincoln Forest Reserve—CLEMENT HIGHTOWER, Forest Supervisor, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Ranger in Charge, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.



## OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.

## OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Baker City Forest Reserve—S. S. TERRELL, Forest Supervisor, Sumpter, Oreg.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Ranger in Charge, Prineville, Oreg.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

## SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.; E. M. HAMILTON, Scaler, Rochford, S. Dak.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

## UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

Logan Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Ranger in Charge, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah; J. H. RAMSKILL, Forest Assistant, Parowan, Utah.

Uinta Forest Reserve—D. S. MARSHALL, Forest Supervisor, Kamas, Utah.

## WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspert, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

## WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn, Wyo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Pinedale, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY W. THURSTON, Forest Ranger, Marquette, Wyo.

### SERVICE CHANGES IN JANUARY.

#### APPOINTED.

C. E. GAGE, Stenographer and Typewriter, \$900 per annum; assigned to Section of Files, Stenography, and Typewriting.

HARRY A. BLILER, Forest Agent, \$900 per annum; assigned to Minnesota Forest Reserve.

Miss L. J. ROBINSON, Clerk, \$480 per annum; assigned to Section of Forest Computation.

Miss ANNA HAWKINS, Clerk, \$480 per annum; assigned to Section of Forest Computation.

WALTER J. MOSENTHAL, Forest Student, \$300 per annum; assigned to Section of Reserve Boundaries.

The following persons were appointed Assistant Forest Rangers at \$900 per annum, upon certification by the Civil Service Commission:

JOHN D. F. BEARD, Tonto Forest Reserve, Arizona.

B. L. SWANSON, Shasta Forest Reserve, California.

CLAUDE THOMPSON, Sierra Forest Reserve (Northern Division), California.

ALFRED T. LEE, Medicine Bow Forest Reserve, Colorado.

TAYLOR E. JULIEN and ALBERT H. WILLIAMS, Holy Cross Forest Reserve, Colorado.

EUGENE WILLIAMS, CHARLES N. MILLER, and CHARLES J. STAHL, Cochetopah Forest Reserve, Colorado.

FRANK A. BLAIR, Leadville Forest Reserve, Colorado.

MAGNUS J. DURANT, Bitter Root Forest Reserve, Idaho.

DANIEL J. DUNHAM and JAMES S. GARRISON, Bitter Root Forest Reserve, Montana.

CHARLES C. HALL, Hell Gate Forest Reserve, Montana.

RALPH J. EVELETH, Little Belt Forest Reserve, Montana.

CLIFTON M. HUDSON, Madison Forest Reserve, Montana.

CHARLES BLACK, MARSHALL GRIFFIN, and WILLIAM STEWART, Wallowa Forest Reserve, Oregon.

SELDEN F. HARRIS, Dixie Forest Reserve, Utah.

ERNEST E. FISHEL, Olympic Forest Reserve, Washington.

EDGAR E. MORTIMORE, Yellowstone Forest Reserve (Wind River Division), Wyoming.

TRUMAN O. SMITH and WARREN H. RUTLEDGE, Medicine Bow Forest Reserve, Wyoming.

#### PROMOTED.

OVERTON W. PRICE, Associate Forester, \$2,700 to \$3,000 per annum; promotion made for exceptionally high character of services and in view of great increase of responsibility.

EUGENE S. BRUCE, Forest Inspector at \$2,500, to Expert Lumberman at \$3,000 per annum; promotion made for valuable services as a practical lumberman.

GEORGE B. SUDWORTH, Assistant Forester and Chief of Dendrology, \$2,500 to \$2,700 per annum; promotion made for proficiency and valuable services in dendrological investigations.

WILLIAM L. HALL, Assistant Forester and Chief of Forest Products, \$2,400 to \$2,700 per annum; promotion made for high efficiency in conducting technical investigations in forest products.

THOMAS H. SHERRARD, Assistant Forester and Chief of Forest Management, \$2,400 to \$2,700 per annum; promotion made for high efficiency in conducting important lines of technical work in forest management.

F. E. OLMSTED, Assistant Forester in Charge of Inspection, \$2,400 to \$2,700 per annum; promotion made for high character of services and in view of material increase of responsibility.

JAMES B. ADAMS, Chief of Records at \$2,200, to Inspector at \$2,500 per annum; promotion made for high efficiency as a business expert and in view of material increase of responsibility.



GEORGE W. WOODRUFF, Expert in Charge of Section of Forest Law, \$2,000 to \$2,300 per annum; promotion made for valuable services and special acquirements in forest law.

ALEXANDER C. SHAW, Examiner, \$2,000 to \$2,200 per annum; promotion made for valuable services and acquirements in public-land laws and procedure.

ERNEST A. STERLING, Assistant Forester and Chief of Forest Extension, \$1,600 to \$2,000 per annum; promotion made for high efficiency in conducting important lines of technical work in forest extension.

GEORGE E. KING, in Charge of Accounts and Supplies, \$1,800 to \$2,000 per annum; promotion made on excellent record and in view of material increase of responsibility.

JOHN FOLEY, Assistant Forest Inspector, \$1,700 to \$1,800 per annum; promotion made for excellent work in the organization and supervision of the Section of Forest Computation.

GEORGE G. ANDERSON, in Charge of Records, \$1,600 to \$1,800 per annum; promotion made on excellent record and in view of material increase of responsibility.

A. K. CHITTENDEN, Assistant Forest Inspector at \$1,600, to Forest Inspector at \$1,800 per annum; promotion made on record as Assistant to the Chief of Forest Management.

W. E. JACKSON, Forest Supervisor, Big Horn Forest Reserve, \$1,500 to \$1,800 per annum; promotion made for efficiency and in view of increased responsibility.

COERT DUBOIS, Assistant Forest Inspector at \$1,500, to Forest Inspector at \$1,800 per annum; promotion made on record as Chief of Section of Forest Reserves and in view of material increase of responsibility.

R. E. BENEDICT, Forest Inspector, \$1,200 to \$1,800 per annum; promotion made on record as Forest Inspector and in view of material increase of responsibility.

CARL G. CRAWFORD, Computer and Forest Agent in Charge of Section of Wood Preservation, \$1,500 to \$1,700 per annum; promotion made for efficiency in conducting experiments in methods for the preservation of wood.

HARRY L. HILL, Clerk to the Forester, \$1,500 to \$1,600 per annum; promotion made for high efficiency.

ELERS KOCH, Forest Inspector, \$1,400 to \$1,600 per annum; promotion made on record for efficiency.

J. H. HATTON, Forest Inspector, \$1,200 to \$1,600 per annum; promotion made on record for efficiency.

SMITH RILEY, Forest Inspector, \$1,200 to \$1,600 per annum; promotion made on record for efficiency.

A. W. JENSEN, Forest Supervisor, Manti Forest Reserve, \$1,200 to \$1,600 per annum; promotion made for efficiency and in view of increased responsibility.

A. W. COOPER, Forest Assistant at \$1,300, to Assistant Forest Inspector at \$1,500 per annum; promotion made for efficiency in conducting studies of commercial trees.

J. GIRVIN PETERS, Forest Assistant at \$1,300, to Assistant Forest Inspector at \$1,500 per annum; promotion made for efficiency in conducting special lines of technical work in forest management.

EDWARD E. CARTER, Forest Assistant at \$1,000, to Forest Inspector at \$1,500 per annum; promotion made for efficiency in the inspection of technical work in forest management upon the forest reserves.

W. B. GREELEY, Forest Assistant at \$1,200, to Forest Inspector at \$1,500 per annum; promotion made for efficiency in the inspection of technical work in forest management upon the forest reserves.

H. D. TIEMANN, Forest Assistant, \$1,300 to \$1,400 per annum; promotion made for efficiency in conducting laboratory experiments in timber testing.

W. T. COX, Forest Assistant at \$1,000, to Assistant Forest Inspector at \$1,400 per annum; promotion made for efficiency in the examination of lands for new forest reserves and in the administration of the reserves.

R. W. SHELLABARGER, Forest Supervisor, Wet Mountains, San Isabel, and Cochetopah forest reserves, \$900 to \$1,400 per annum; promotion made for efficiency and in view of increased responsibility.

PAUL G. REDINGTON, Forest Assistant at \$1,100, to Forest Inspector at \$1,300 per annum; promotion made for efficiency in the inspection of technical work in forest management upon the forest reserves.

C. A. SCOTT, Forest Assistant, \$1,100 to \$1,300 per annum; promotion made for efficiency in the supervision of all forest reserves in Kansas and Nebraska.

R. S. KELLOGG, Forest Assistant, \$1,000 to \$1,300 per annum; promotion made for efficiency in the organization of the Section of Lumber Trade and the compilation of statistics of forest products.

G. M. HOMANS, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

PAUL D. KELLETER, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

C. A. LYFORD, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

LOUIS MARGOLIN, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

H. G. MERRILL, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

A. B. PATTERSON, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

W. R. MATTOON, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

F. W. BESLEY, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

KARL W. WOODWARD, Forest Assistant, \$1,100 to \$1,200 per annum; promotion made on record for efficiency.

W. G. WEIGLE, Forest Assistant, \$1,000 to \$1,200 per annum; promotion made on record for efficiency.

HUGH P. BAKER, Forest Assistant, \$1,000 to \$1,200 per annum; promotion made on record for efficiency.

THOMAS HOGAN, Assistant Forest Ranger at \$900, to Forest Ranger at \$1,200 per annum; assigned to Park Range Forest Reserve; promotion made for efficiency and in view of increased responsibility.

P. T. WRENSTED, Forest Supervisor, Pocatello and Cassia forest reserves, \$900 to \$1,200 per annum; promotion made for efficiency and in view of increased responsibility.

H. B. EASTMAN, Forest Assistant, \$1,000 to \$1,100 per annum; promotion made on record for efficiency.

S. J. FLINTHAM, Forest Assistant, \$1,000 to \$1,100 per annum; promotion made on record for efficiency.

G. W. PEAVY, Forest Assistant, \$1,000 to \$1,100 per annum; promotion made on record for efficiency.

GRANT BRUCE, Forest Agent, \$1,000 to \$1,100 per annum; promotion made on record for efficiency.

G. H. WILLIAMS, Mail Clerk, \$1,000 to \$1,100 per annum; promotion made on record for efficiency.

Miss FLORENCE D. STRAUSE, Clerk, \$1,000 to \$1,100 per annum; promotion made on record for efficiency.

W. B. HADLEY, Forest Assistant, \$900 to \$1,000 per annum; promotion made on record for efficiency.

A. A. WILEY, Stenographer and Typewriter, \$900 to \$1,000 per annum; promotion made to fill vacancy on statutory roll and in view of assignment as assistant stenographer to the Forester.

E. A. ZIEGLER, Forest Agent at \$800, to Computer at \$1,000 per annum, upon certification by the Civil Service Commission and for efficiency.

Mrs. L. T. CONWAY, Stenographer and Typewriter, \$720 to \$900 per annum; promotion made to fill vacancy on statutory roll and in view of advanced grade of work in Section of Publication and Education.

FRANK TOMPKINS, Forest Agent, \$700 to \$800 per annum; promotion made for efficiency in the marking of timber and inspection of logging upon the Minnesota National Forest Reserve.

Miss STELLA W. MUNCE, Clerk, \$600 to \$720 per annum; promotion made to fill vacancy on statutory roll and on record for efficiency.

Miss G. E. WHARTON, Clerk, \$480 to \$600 per annum; promotion made to fill vacancy on statutory roll and on record for efficiency.

Miss LEONA JACKSON, Clerk, \$480 to \$600 per annum; promotion made on record for efficiency.

The following Assistant Forest Rangers were promoted from \$720 to \$900 per annum, in accordance with Forest Reserve Order No. 18:

S. B. HENDERSON, A. J. MACKAY, DAVID I. PENROD, D. C. MARTIN, JOHN LEWIS, and D. B. RUDD, Black Mesa Forest Reserve, Arizona.



G. A. REED and S. B. SHUMWAY, Grand Canyon Forest Reserve (Southern Division), Arizona.

LORUM PRATT, JR., and JOSEPH MILLET, JR., Grand Canyon Forest Reserve (Northern Division), Arizona.

W. M. RUDD, JR., JERRY J. FISHER, W. M. PIERCE, W. A. PHELPS, and ERNEST B. LONG, San Francisco Mountains Forest Reserve, Arizona.

E. S. ZUMWALT and EUGENE B. ZUMWALT, Sierra Forest Reserve (Southern Division), California.

WILLARD L. SEARS, WM. J. RUSHING, OLIVER P. BROWNLOW, WM. ANTONINI, and THOMAS C. WEST, Stanislaus Forest Reserve, California.

CHARLES FICK, J. H. B. ALLEN, F. J. JEKEN, H. T. EASTON, and BERT SWITZER, San Bernardino Forest Reserve, California.

L. C. TILPHMAN, JAMES BRADFORD, THOMAS LUCAS, T. P. HARDY, S. B. CLIFTON, W. L. SEVIER, J. W. RYERSON, EUGENE C. CALEY, J. E. GRAHAM, and W. W. BACON, San Gabriel Forest Reserve, California.

F. W. THORNTON, EDWARD BICH, JESSE M. SILVAS, and Frank N. CLARK, San Jacinto Forest Reserve, California.

ZACH T. DAVIDSON, STUART A. SLOSSON, A. L. BARROWS, ALFREDO DE LA RIVA, H. W. MUZZOLL, EDGAR B. DAVISON, A. D. MARTIN, R. G. H. FORSYTH, and J. H. HECTOR, Santa Barbara Forest Reserve, California.

PERCY GARDNER and HENRY J. BELL, Sierra Forest Reserve (Northern Division), California.

SAMUEL P. ALLEN, OSWALD H. KLEIN, W. W. BAKER, and BYRON E. SMITH, Sierra Forest Reserve (Southern Division), California.

J. H. PATTERSON and HOWARD R. SHERMAN, Pikes Peak Forest Reserve, Colorado.

CHARLES SMITH and SIDNEY E. MOYLLE, White River Forest Reserve, Colorado.

T. S. RACKLIFF, W. G. LITCHFIELD, S. I. MCPHERSON, EDWARD M. CLARK, and JAMES STUART, Bitter Root Forest Reserve, Idaho.

RAY MCKENZIE and ARCHIE NEWCOMB, Priest River Forest Reserve, Idaho.

JOHN W. RICE, JOHN SULLIVAN, and ERNEST C. BOND, Lewis and Clark Forest Reserve (Southern Division), Montana.

JOHN C. WEST, THOMAS J. ORR, JR., and CHARLES E. BUCHANAN, Yellowstone Forest Reserve (Absaroka Division), Montana.

H. M. BUTLER, WILLIAM SEE, WILLIAM W. COX, and JAMES D. VANCE, Bitter Root Forest Reserve, Montana.

J. W. GLOSSBRENNER and JOHN MUNDY, Gila Forest Reserve, New Mexico.

L. H. MOSEMAN, Pecos River Forest Reserve, New Mexico.

O. A. MORRISSEY, Wichita Forest Reserve, Oklahoma.

WM. E. BERRY, Baker City Forest Reserve, Oregon.

GEORGE A. GORDER, JACOB SIMPSON, JAY BUNTING, FRANK T. SMITH, and J. F. CONLON, Black Hills Forest Reserve, South Dakota.

AMBROSE SHURTZ, ORRIN C. SNOW, RUFUS H. LISTON, WALTER E. HANKS, and JOSEPH J. PORTER, Aquarius Forest Reserve, Utah.

HENRY F. ALBRECHT, Fish Lake Forest Reserve, Utah.

JAMES LEATHAM and J. F. ANDERSON, Logan Forest Reserve, Utah.

CHRIST MORGENROTH, PAUL LAUFIELD, JOHN DYKE, and EMERY J. FINCH, Olympic Forest Reserve, Washington.

W. A. McCULLOUGH and ELIAS J. WIGAL, Mount Rainier Forest Reserve, Washington.

OLIVER S. COLEMAN, Washington Forest Reserve (Western Division), Washington.

JULIUS HENRICH, JAY C. CLARK, JOHN T. HOUGH, HENRY C. HALL, ARTHUR C. ROBERTS, and SILAS W. YARNALL, Yellowstone Forest Reserve (Wind River Division), Wyoming.

EDGAR W. SMITH, L. N. MCCREERY, and A. HETTINGER, Big Horn Forest Reserve, Wyoming.

JAMES BLACKALL, Medicine Bow Forest Reserve, Wyoming.

CLARENCE B. SWIM and EDGAR E. HEAVEY, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

#### RESIGNATION ACCEPTED.

LEWIS JOHNSON, Assistant Forest Ranger, Cascade Forest Reserve (Northern Division), Oregon.

## RESIGNED FROM THE SERVICE.

H. H. JONES, Examiner.

Prof. A. V. STUBENRAUCH, Collaborator.

BERTRAM D'ALTON, Expert.

E. H. HAREFORD, Forest Assistant.

T. J. TAYLOR, Forest Assistant.

J. C. BLUMER, Forest Assistant.

MARCUS SCHAAF, Forest Student.

Miss EDITH F. GARDNER, Clerk.

Mrs. L. P. HISS, Clerk.

GUY RATLIFF, Assistant Forest Ranger, Little Belt Forest Reserve, Montana.

## REMOVED FROM THE SERVICE.

W. H. HESEMAN, Assistant Forest Ranger, Cascade Forest Reserve (Northern Division), Oregon.

HENRY E. STEED, Assistant Forest Ranger, Cascade Forest Reserve (Northern Division), Oregon.

EPHRAIM HENNESS, Assistant Forest Ranger, Cascade Forest Reserve (Northern Division), Oregon.

M. D. MARKHAM, Assistant Forest Ranger, Cascade Forest Reserve (Northern Division), Oregon.



# United States Department of Agriculture,

## FOREST SERVICE,

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAMME FOR MARCH, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are indefinite and reference to projects for which plans have not been matured are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

Work conducted under the direction of the Forester is designated (F); Forest Management (M); Dendrology (D); Forest Products (P); Forest Extension (E).

#### ADMINISTRATION.

GIFFORD PINCHOT, *Forester.*

OVERTON W. PRICE, *Associate Forester.*

THOMAS H. SHERRARD, *Assistant Forester in Charge of Forest Management.*

GEO. B. SUDWORTH, *Assistant Forester in Charge of Dendrology.*

WILLIAM L. HALL, *Assistant Forester in Charge of Forest Products.*

E. A. STERLING, *Assistant Forester in Charge of Forest Extension.*

JAMES B. ADAMS, *Special Fiscal Agent.*

G. G. ANDERSON, *in Charge of Records.*

HERBERT A. SMITH, *in Charge of Section of Publication and Education.*

G. W. WOODRUFF, *in Charge of Section of Law.*

A. F. POTTER, *in Charge of Section of Grazing.*

RAPHAEL ZON, *in Charge of Section of Silvics.*

F. W. REED, *in Charge of Section of Reserve Boundaries.*

COERT DUBOIS, *Forest Inspector, detailed as District Forester, Western District.*

E. E. CARTER, *Forest Inspector, detailed as District Forester, Southern District.*

ELERS KOCH, *Forest Inspector, detailed as District Forester, Northern District.*

#### FIELD WORK.

##### INSPECTION.

##### *Office of the Forester:*

F. E. OLMSTED, *Assistant Forester in Charge of General Inspection.*

E. T. ALLEN, *Forest Inspector, Sacramento, Cal.*

SMITH RILEY, *Forest Inspector, Glenwood Springs, Colo.*

W. T. COX, *Assistant Forest Inspector, Tacoma, Wash.*

W. C. HODGE, Jr., *Assistant Forest Inspector.*

R. H. CHARLTON, *Forest Inspector, Los Angeles, Cal.*

R. E. BENEDICT, *Forest Inspector.*



*Forest Management:*

- A. K. CHITTENDEN, *Forest Inspector in Charge of Technical Inspection*.  
 W. B. GREELEY, *Forest Inspector*, 180 Perry street, Oakland, Cal.  
 A. W. COOPER, *Forest Inspector*.  
 P. G. REDINGTON, *Forest Inspector*.  
 K. W. WOODWARD, *Assistant Forest Inspector*, Salt Lake City, Utah.  
 J. S. HOLMES, *Assistant Forest Inspector*, Santa Fe, N. Mex.  
 G. W. HOMANS, *Assistant Forest Inspector*, Portland, Oreg.  
 C. A. LYFORD, *Assistant Forest Inspector*, Cheshire House, Keene, N. H.  
 A. B. PATTERSON, *Assistant Forest Inspector*, New Orleans, La.  
 E. S. BRUCE, *Expert Lumberman, in Charge of Inspection of Logging*.  
 W. E. LA FOUNTAIN, *Assistant Forest Inspector*, Deadwood, S. Dak.  
 E. M. HAMILTON, *Expert*, Deadwood, S. Dak.

*Forest Products:*

HENRY GRINNELL, *Assistant Forest Inspector*.

## ALABAMA.

- (M) Study of red cedar—L. L. WHITE, Uniontown, Ala.

## ARIZONA.

- (F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistant, J. B. LEIBERG, Prescott, Ariz.

## CALIFORNIA.

- (M) Market study of commercial species—M. B. PRATT and C. J. BUCK, Occidental Hotel, San Francisco, Cal.  
 (M) Examination of proposed cuttings, Santa Barbara Forest Reserve—P. T. HARRIS, Stauffer, Cal.; assistants, W. B. PIPER and W. G. DURBIN.  
 (M) Examination of timber in the Sierra Forest Reserve—F. G. PLUMMER, care W. B. GREELEY, 180 Perry street, Oakland, Cal.  
 (D) Study of tanbark oaks of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley, Cal.  
 (D) Special studies of California trees, four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY; permanent address, Stanford University, Cal.  
 (E) Study of planted timber and of State forest lands, in cooperation with the State—S. J. FLINTHAM, Occidental Hotel, San Francisco, Cal.  
 (E) Preparation of planting plans, in cooperation with landowners—G. B. LULL, Hotel Lillie, Los Angeles, Cal.; assistant, H. O. STABLER.  
 (E) Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, B. R. H. D'ALLEMAND, Santa Barbara, Cal.  
 (E) Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, S. Y. PARNAY.  
 (P) Tests of the strength of eucalyptus wood, in cooperation with University of California—L. E. HUNT, Berkeley, Cal.; assistant, A. J. CLEARY.  
 (P) Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in southern California—W. R. WHEATON, Hotel Lillie, Los Angeles, Cal.; assistant, O. T. SWAN.  
 (F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Hotel Hollenbeck, Los Angeles, Cal.; assistant, S. G. SMITH, Independence, Cal.

## COLORADO.

- (E) Lectures before farmers' institutes, and study of forest conditions on watersheds of several cities in Colorado—F. W. BESLEY, Colorado Springs, Colo.

## CONNECTICUT.

- (P) Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven, Conn.; assistants, M. CLINE and CORNELIUS BARRY.

(P) Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven, Conn.

#### DISTRICT OF COLUMBIA.

(P) Plans for timber treating and testing laboratory in Washington, D. C.—C. G. CRAWFORD and S. M. ROWE, Washington, D. C.

#### FLORIDA.

(D) Improved methods of turpentine, experimental pine forests, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs, Fla.

#### HAWAII.

(E) Examination of lands for insular forest reserves—R. S. HOSMER, Honolulu, Hawaii.

#### INDIANA.

(P) Timber testing at Lafayette, Ind., in cooperation with Purdue University—Dr. W. K. HATT, Lafayette, Ind.; assistants, H. D. HARTLEY, O. P. M. GOSS, and T. A. NEWLIN.

#### MARYLAND.

(M) Study of Potomac River watershed—W. W. ASHE, Hancock, Md.; assistants, W. C. LATANE, JR., and J. A. FITZWATER.

(P) Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton, Md.

#### MASSACHUSETTS.

(M) Woodlot and timber-tract examinations, in cooperation with the State—ALFRED AKERMAN, State Forester, Boston, Mass.

(P) Experiments to determine the value of various woods for pulp—A. D. LITTLE and H. S. BRISTOL, 93 Broad street, Boston, Mass.

#### MICHIGAN.

(P) Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and Wisconsin Central railroad companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba, Mich.; assistant, C. S. SMITH.

#### MISSISSIPPI.

(E) Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College, Miss.

#### NEBRASKA.

(E) Care of Government nursery, Dismal River Forest Reserve—C. A. SCOTT, Halsey, Nebr.; assistants, W. H. MAST and LAMORE BESLEY.

#### NEVADA.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistants, R. B. WILSON and L. VON WERNSTED, Las Vegas, Nev.; R. S. BALDWIN, Caliente, Nev.; W. J. MOSENTHAL, Carson City, Nev., and Moafa, Nev.

#### NEW HAMPSHIRE.

(M) Study of woodlot and forest conditions in southern New Hampshire, in cooperation with the State—L. MARGOLIN, Cheshire House, Keene, N. H.; assistants, A. T. BOISEN, H. C. NEEL, B. MACKAYE, and W. C. WICKHAM.

#### NEW MEXICO.

(E) Nursery work and preparation of planting plans for portions of the Fort Bayard Military Reservation and Gila Forest Reserve—W. R. MATTOON, Fort Bayard, N. Mex.; assistant, W. B. HADLEY.



(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistant, R. V. R. REYNOLDS, Carlsbad, N. Mex.

#### NORTH CAROLINA.

(D) Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON; permanent address, Chapel Hill, N. C.

#### OREGON.

(P) Tests of the strength of red fir, in cooperation with University of Oregon—J. F. KNAPP, Eugene, Oreg.

#### PENNSYLVANIA.

(E) Preliminary study, in cooperation with the Pennsylvania Railroad Company, to determine a forest policy for the company—R. C. BRYANT, Bingham House, Philadelphia, Pa.

#### TEXAS.

(D) Study of forest conditions of the Big Thicket country—Prof. W. L. BRAY; permanent address, Austin, Tex.

#### VIRGINIA.

(P) Experiments in grading and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, Norfolk, Va.

#### WASHINGTON.

(P) Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle, Wash.

(P) Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma, Wash.

#### WISCONSIN.

(M) Supervision of timber cutting and marking of timber for cutting on Indian reservations, in cooperation with Office of Indian Affairs—W. G. WEIGLE, Ashland, Wis.

#### WYOMING.

(M) Examination of proposed timber sales, Yellowstone Forest Reserve—I. T. WORTHLEY, Wapiti, Wyo.

### REGIONAL STUDIES.

#### EASTERN STATES.

(M) Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

#### MIDDLE WESTERN STATES.

(M) Examination of woodlots and timber tracts, in cooperation with land-owners—S. J. RECORD, Crawfordsville, Ind.

### GENERAL STUDIES.

(E) Study of planting on forest reserves—L. C. MILLER, Washington, D. C.

(E) Investigations of coniferous seeds, in cooperation with the Seed Testing Laboratory—E. O. SIECKE, Washington, D. C.

(E) Preliminary studies for investigations of city watersheds within forest reserves—W. J. GARDNER, Washington, D. C.

(E) Cooperative work with railroads and individual land owners in Louisiana and the Middle West—S. N. SPRING, 2838 North Hermitage avenue, Chicago, Ill.

(P) Collection of statistics of forest products for year 1905—R. S. KELLOGG and H. M. HALE, Washington, D. C.; GEO. K. SMITH, Equitable Building, St. Louis, Mo.

(P) Study of woods used in the cooperage industry—J. J. LEVISON, Washington, D. C.

(P) Study of woods used in the vehicle and implement industry—H. B. HOLROYD, Washington, D. C.

(P) Study of woods used for street paving—C. L. HILL, Washington, D. C.

(P) Study of woods used for box and basket purposes—J. P. WENTLING, Washington, D. C.

(P) Study of methods of kiln drying—FREDERICK DUNLAP, Washington, D. C.

(P) Study of lumber prices—MANASSEH SMITH, Washington, D. C.

(P) Study of utilization of dead timber on forest reserves—E. R. HODSON and J. D. WARNER, Washington, D. C.

## FOREST RESERVES.

### ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

### ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise, Ariz.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott, Ariz.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Globe, Ariz.; W. W. CLARK, Assistant Forest Inspector, Globe, Ariz.

### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Tahoe Forest Reserve—D. B. SHELLER, Forest Superintendent in Charge, Nevada City, Cal.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Modoc Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; J. REBMANN, Forest Assistant, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve (McCloud Division)—J. H. HATTON, Forest Inspector in Charge, Sisson, Cal.



Shasta Forest Reserve (Western Division)—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTON, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Ranger in Charge, Sonora, Cal.; JOHN C. WELLS, Forest Ranger, Bridgeport, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Yuba Forest Reserve—D. B. SELLER, Forest Superintendent in Charge, Nevada City, Cal.

#### COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Holy Cross Forest Reserve—SHEP. N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Montezuma Forest Reserve—F. A. SILCOX, Assistant Forest Inspector in Charge, Durango, Colo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—JAMES H. CLARKE, Forest Supervisor, Denver, Colo.; G. E. CLEMENT, Forest Assistant, Denver, Colo.; W. D. EDMONSTON, Forest Ranger, Larkspur, Colo.

San Isabel Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Durango, Colo.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Montrose, Colo.

Wet Mountains Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. MCCONNELL, Forest Supervisor, Priest River, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Weiser Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

## MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. MCKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMPKINS and H. A. BLILER, Forest Agents, Cass Lake, Minn.

## MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Gallatin Forest Reserve—MICHAEL LANGOHR, Forest Supervisor, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Ovando, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Tony, Mont.

## NEW MEXICO.

Gila Forest Reserve—R. C. MCCLURE, Forest Supervisor, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Jemez Forest Reserve—M. L. ERICKSON, Assistant Forest Inspector in Charge, Santa Fe, N. Mex.

Lincoln Forest Reserve—JOHN KERR, Forest Ranger in Charge, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Ranger in Charge, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.

## OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.

## OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Baker City Forest Reserve—S. S. TERRELL, Forest Supervisor, Sumpter, Oreg.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Walla, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Ranger in Charge, Prineville, Oreg.



Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver, Utah.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

Logan Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Ranger in Charge, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah; J. H. RAMSKILL, Forest Assistant, Parowan, Utah.

Uinta Forest Reserve—D. S. MARSHALL, Forest Supervisor, Kamas, Utah.

#### WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspport, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

#### WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn, Wyo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Wapiti, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY W. THURSTON, Forest Ranger, Marquette, Wyo.

## SERVICE CHANGES IN FEBRUARY.

## APPOINTED.

P. P. WELLS, Expert, \$1,800 per annum; assigned to Section of Law.

H. K. PORTER, Forest Supervisor, \$1,400 per annum; assigned to Uncompahgre Forest Reserve, Colorado.

Miss Z. F. PENCE, Stenographer and Typewriter, \$700 per annum; assigned to Section of Files, Stenography, and Typewriting.

J. S. MANSUY, Messenger, \$360 per annum.

The following persons were appointed Assistant Forest Rangers at \$900 per annum, upon certification by the Civil Service Commission:

R. A. RODGERS, Santa Rita Forest Reserve, Colorado.

JOHN McLAREN and JAMES A. BLAIR, Holy Cross Forest Reserve, Colorado.

J. G. NEIDHARDT, Leadville Forest Reserve, Colorado.

C. H. UNDERWOOD, Gunnison Forest Reserve, Colorado.

EDWIN S. ARMENTROUT and LEMUEL D. CRANDALL, Pikes Peak Forest Reserve, Colorado.

LEO MARSTON, Elkhorn Forest Reserve, Montana.

PAUL F. GRIFFITH, Lincoln Forest Reserve, New Mexico.

J. D. WALLACE and E. W. GRIBBLE, Cascade Forest Reserve (North), Oregon.

G. C. SMITH, H. C. FLORMAN, and G. D. HARRIS, Black Hills Forest Reserve, South Dakota.

P. G. PETERSON, Yellowstone Forest Reserve (Wind River Division), Wyoming.

CHARLES E. McMULLIN and HENRY L. SPENCER, Uncompahgre Forest Reserve, Colorado.

GERALD MERRILL, Tonto Forest Reserve, Arizona.

GEORGE H. BIRDNO, Mount Graham Forest Reserve, Arizona.

GEORGE H. BELKNAP and HARRY E. MILLER, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

E. W. SHAW and J. W. MELROSE, San Juan Forest Reserve, Colorado.

CYRUS K. WYMAN, Hellgate Forest Reserve, Montana.

The following persons were appointed Forest Guards at \$720 per annum:

C. H. DERRY, F. G. BLAKE, HUGH HARRIS, C. R. DEVIER, L. A. HARTZER, L. J. MUNDELL, J. C. DEXTER, and ALBERT ABBOTT, Jemez Forest Reserve, New Mexico.

JAMES TAYLOR, Medicine Bow Forest Reserve, Colorado.

E. G. SPRINGER and CONRAD ALLES, Sierra Forest Reserve (North), California.

JAMES N. REYNOLDS, Pecos Forest Reserve, New Mexico.

CHARLES A. HINDERER, Prescott Forest Reserve, Arizona. ✓

## PROMOTED.

L. G. DAVIS, Forest Supervisor, Medicine Bow Forest Reserve, from \$1,500 to \$1,600 per annum; promotion made for efficiency.

T. P. LUKENS, Acting Supervisor, San Gabriel and San Bernardino forest reserves, from \$1,300 to \$1,600 per annum; promotion made for efficiency and in view of increased responsibility.

F. C. W. POOLER, Ranger in Charge, Prescott Forest Reserve, at \$1,000 per annum, to Forest Supervisor at \$1,600 per annum; promotion made on record as Ranger in Charge.

J. F. SMITH, Forest Ranger at \$1,080, to Forest Supervisor at \$1,500 per annum; promotion made to fill vacancy caused by resignation of Captain Seth Bullock and on record as Ranger.

J. R. BELL, Forest Supervisor, San Jacinto and Trabuco Canyon forest reserves, from \$1,200 to \$1,400 per annum; promotion made for efficiency.

S. N. SPRING, Forest Assistant, \$1,200 to \$1,400 per annum; promotion made for efficiency.



E. T. MORRISSEY, Forest Supervisor, Wichita Forest Reserve, from \$1,000 to \$1,400 per annum; promotion made for efficiency.

WILLIAM HURST, Assistant Forest Ranger, Dixie Forest Reserve, at \$900 per annum, to Forest Supervisor at \$1,400 per annum; assigned to Beaver Forest Reserve; promotion made on record as Ranger and upon certification by Civil Service Commission.

ROBERT J. MOORE, Forest Ranger in Charge, Elkhorn and Big Belt forest reserves, from \$1,080 to \$1,200 per annum; promotion made on record as Ranger in Charge and in view of increased responsibility.

JOHN F. SQUIRES, Forest Supervisor, Logan Forest Reserve, from \$1,000 to \$1,200 per annum; promotion made for efficiency.

LORUM PRATT, Forest Supervisor, Grand Canyon Forest Reserve (North), from \$1,000 to \$1,200 per annum; promotion made for efficiency.

SYLVANUS COLLETT, Ranger in Charge, Dixie Forest Reserve, from \$900 to \$1,200 per annum; promotion made for efficiency and in view of increased responsibility.

JAMES BLACKHALL, Assistant Forest Ranger, Medicine Bow Forest Reserve, at \$900 per annum, to Forest Ranger at \$1,200 per annum; promotion made for efficiency.

C. H. DODGE, Deputy Forest Ranger at \$900, to Forest Ranger at \$1,080 per annum; promotion made to fill vacancy and on record as Deputy Forest Ranger.

ELMORE W. SEARCY, Assistant Forest Ranger, Little Belt Forest Reserve, at \$900 per annum, to Deputy Forest Ranger at \$1,000 per annum; promotion made for efficiency.

Miss M. R. LATIMER, Clerk, \$720 to \$800 per annum; promotion made to fill vacancy on statutory roll and on record for efficiency.

Miss LULA STEWART, Clerk, \$600 to \$720 per annum; promotion made to fill vacancy on statutory roll and on record for efficiency.

Mrs. S. W. RAMSAUR, Clerk, \$480 to \$600 per annum; promotion made to fill vacancy on statutory roll and on record for efficiency.

C. J. C. AUCOIN, Messenger, \$360 to \$480 per annum; promotion made for efficiency and in view of advance in grade of work.

The following Assistant Forest Rangers were promoted from \$720 per annum to \$900 per annum, in accordance with Forest Reserve Order No. 18:

FRED PLATTEN, San Francisco Forest Reserve, Arizona.

WILLIAM F. BINGHAM and GEO. A. PETER, Lincoln Forest Reserve, New Mexico.

C. A. BALLINGER, Slim Buttes, Cave Hills, and Short Pine forest reserves, South Dakota.

O. S. COLEMAN, Washington Forest Reserve, Washington.

#### RESIGNED FROM THE SERVICE.

SETH BULLOCK, Forest Supervisor, Black Hills Forest Reserve.

J. J. BLYDENSTEIN, Assistant Forest Ranger, Lewis and Clark Forest Reserve (South).

C. M. BONNIFIELD, Assistant Forest Ranger, Pikes Peak Forest Reserve.

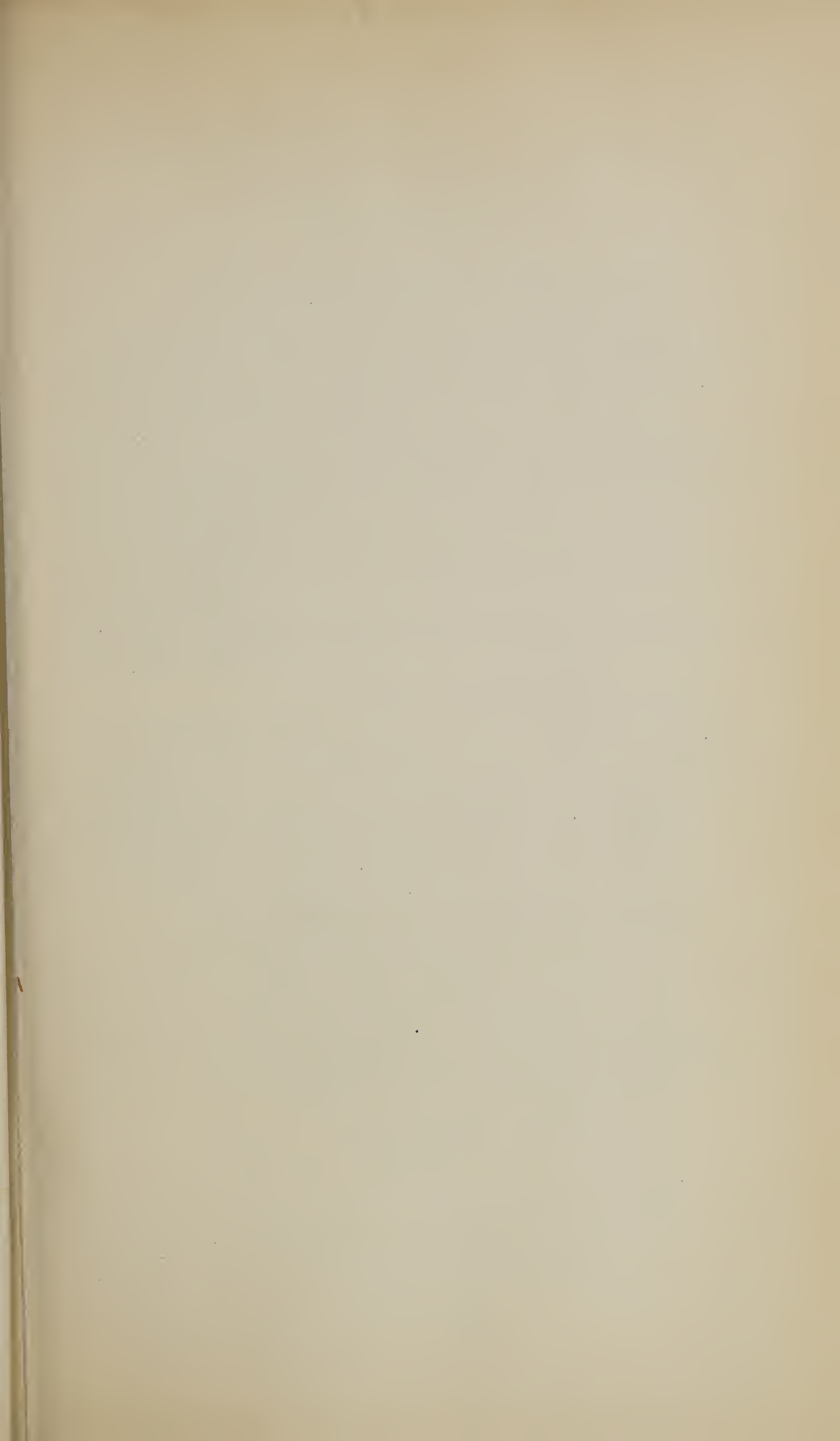
GEORGE L. BRADFORD, Assistant Forest Ranger, Lincoln Forest Reserve.

JOHN MUSSELL, Scaler, Big Horn Forest Reserve.

#### REMOVED FROM THE SERVICE.

W. P. MCLEOD, Assistant Forest Ranger, Prescott Forest Reserve.

With deep regret, announcement is made of the death, on February 11, 1906, of Prof. A. J. McCLATCHIE, for many years a Collaborator in the Forest Service.







# United States Department of Agriculture,

## FOREST SERVICE,

GIFFORD PINCHOT, Forester.

### FIELD PROGRAMME FOR APRIL, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are indefinite and reference to projects for which plans have not been matured, are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

Work conducted under the direction of the Forester is designated (F); Forest Management (M); Dendrology (D); Forest Products (P); Forest Extension (E).

#### ADMINISTRATION.

GIFFORD PINCHOT, *Forester.*

OVERTON W. PRICE, *Associate Forester.*

THOMAS H. SHERRARD, *Assistant Forester in Charge of Forest Management.*

GEO. B. SUDWORTH, *Assistant Forester in Charge of Dendrology.*

WILLIAM L. HALL, *Assistant Forester in Charge of Forest Products.*

E. A. STERLING, *Assistant Forester in Charge of Forest Extension.*

JAMES B. ADAMS, *Special Fiscal Agent.*

G. G. ANDERSON, *in Charge of Records.*

HERBERT A. SMITH, *in Charge of Section of Publication and Education.*

G. W. WOODRUFF, *in Charge of Section of Law.*

A. F. POTTER, *in Charge of Section of Grazing.*

RAPHAEL ZON, *in Charge of Section of Silvics.*

F. W. REED, *in Charge of Section of Reserve Boundaries.*

COERT DUBOIS, *Forest Inspector, detailed as District Forester, Western District.*

E. E. CARTER, *Forest Inspector, detailed as District Forester, Southern District.*

ELERS KOCH, *Forest Inspector, detailed as District Forester, Northern District.*

#### FIELD WORK.

##### INSPECTION.

##### *Office of the Forester :*

F. E. OLMSTED, *Assistant Forester in Charge of General Inspection.*

E. T. ALLEN, *Forest Inspector, Sacramento, Cal.*

SMITH RILEY, *Forest Inspector, Glenwood Springs, Colo.*

W. T. COX, *Assistant Forest Inspector, Tacoma, Wash.*

W. C. HODGE, JR., *Assistant Forest Inspector.*

R. H. CHARLTON, *Forest Inspector, Los Angeles, Cal.*

R. E. BENEDICT, *Forest Inspector, Kamas, Utah.*



*Forest Management:*

A. K. CHITTENDEN, *Forest Inspector in Charge of Technical Inspection*, Livingston, Mont.

W. B. GREELEY, *Forest Inspector*, 180 Perry street, Oakland, Cal.

A. W. COOPER, *Forest Inspector*.

P. G. REDINGTON, *Forest Inspector*.

K. W. WOODWARD, *Assistant Forest Inspector*, Santa Fe, N. Mex.

J. S. HOLMES, *Assistant Forest Inspector*, Silver City, N. Mex.

G. M. HOMANS, *Assistant Forest Inspector*, Portland, Oreg.

C. A. LYFORD, *Assistant Forest Inspector*.

A. B. PATTERSON, *Assistant Forest Inspector*, Little Rock, Ark.

E. S. BRUCE, *Expert Lumberman, in Charge of Inspection of Logging*.

W. E. LA FOUNTAIN, *Assistant Forest Inspector*, Sheriden, Wyo.

E. M. HAMILTON, *Expert*, Sheriden, Wyo.

*Forest Products:*

HENRY GRINNELL, *Assistant Forest Inspector*.

*Forest Extension:*

G. B. LULL, *Assistant Forest Inspector*, Hotel Lillie, Los Angeles, Cal.

## ARIZONA.

(E) Preparation of planting plan for lands in the Salt River Project, in cooperation with the Reclamation Service—J. M. FETHEROFF, Phoenix, Ariz.

## CALIFORNIA.

(M) Market study of commercial species—M. B. PRATT and C. J. BUCK, Occidental Hotel, San Francisco, Cal.

(M) Examination of proposed cuttings, Santa Barbara Forest Reserve—P. T. HARRIS, Stauffer, Cal.; assistants, W. B. PIPER and W. G. DURBIN.

(M) Examination of timber in the Sierra Forest Reserve—F. G. PLUMMER, care W. B. GREELEY, 180 Perry street, Oakland, Cal.

(D) Study of tanbark oaks of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley, Cal.

(D) Special studies of California trees, four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY; permanent address, Stanford University, Cal.

(E) Study of planted timber and of State forest lands, in cooperation with the State—S. J. FLINTHAM, Occidental Hotel, San Francisco, Cal.

(E) Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, B. R. H. D'ALLEMAND, Santa Barbara, Cal.

(E) Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, S. Y. PARNAY.

(P) Tests of the strength of eucalyptus wood, in cooperation with University of California—L. E. HUNT, Berkeley, Cal.; assistant, A. J. CLEARY.

(P) Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in southern California—W. R. WHEATON, Gold, Madera County, Cal.; assistant, O. T. SWAN.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Hotel Hollenbeck, Los Angeles, Cal.; assistants, S. G. SMITH, Independence, Cal.; R. W. AYRES, Hotel Hollenbeck, Los Angeles, Cal.; and L. VON WERNSTEDT, Hotel Hollenbeck, Los Angeles, Cal.

## COLORADO.

(E) Nursery and planting work, Pikes Peak Forest Reserve, and study of forest conditions on watersheds of several cities in Colorado—F. W. BESLEY, Colorado Springs, Colo.

## CONNECTICUT.

(P) Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven, Conn.; assistant, CORNELIUS BARRY.

(E) Preparation of planting plan for Bridgeport Hydraulic Company, and miscellaneous planting plans in New England—J. F. BOND, Bridgeport, Conn.

(P) Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven, Conn.

#### DISTRICT OF COLUMBIA.

(P) Plans for timber treating and testing laboratory in Washington, D. C.—C. G. CRAWFORD and S. M. ROWE, Washington, D. C.

#### FLORIDA.

(D) Improved methods of turpentineing, experimental pine forests, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs, Fla.

#### HAWAII.

(E) Examination of lands for insular forest reserves—R. S. HOSMER, Honolulu, Hawaii.

#### INDIANA.

(P) Timber testing at Lafayette, Ind., in cooperation with Purdue University—Dr. W. K. HATT, Lafayette, Ind.; assistants, H. D. HARTLEY, O. P. M. GOSS, M. CLINE, and T. A. NEWLIN.

#### MARYLAND.

(M) Study of Potomac River watershed—W. W. ASHE, Hancock, Md.; assistants, W. C. LATANE, JR., and J. A. FITZWATER.

(P) Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton, Md.

#### MASSACHUSETTS.

(M) Woodlot and timber-tract examinations, in cooperation with the State—ALFRED AKERMAN, State Forester, Boston, Mass.

(P) Experiments to determine the value of various woods for pulp—A. D. LITTLE, 93 Broad street, and H. S. BRISTOL, 74 Pinckney street, Boston, Mass.

#### MICHIGAN.

(P) Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and Wisconsin Central railroad companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba, Mich.; assistant, C. S. SMITH.

#### MISSISSIPPI.

(E) Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College, Miss.

#### NEBRASKA.

(E) Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey, Nebr.; assistants, W. H. MAST and LAMORE BESLEY.

#### NEVADA.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistants, R. B. WILSON, Las Vegas, Nev.; CLYDE LEAVETT, Caliente, Nev.

#### NEW HAMPSHIRE.

(M) Study of woodlot and forest conditions in southern New Hampshire, in cooperation with the State—H. C. NEEL, Cheshire House, Keene, N. H.; assistants, A. T. BOISEN, B. MACKAYE, and W. C. WICKHAM.

#### NEW MEXICO.

(E) Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard, N. Mex.; assistant, W. B. HADLEY.



(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Hotel Hollenbeck, Los Angeles, Cal.; assistant, R. V. R. REYNOLDS, Dulce, N. Mex.

#### NORTH CAROLINA.

(D) Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON; permanent address, Chapel Hill, N. C.

#### OREGON.

(P) Tests of the strength of red fir, in cooperation with University of Oregon—J. F. KNAPP, Eugene, Oreg.

#### PENNSYLVANIA.

(E) Preliminary study, in cooperation with the Pennsylvania Railroad Company, to determine a forest policy for the company—R. C. BRYANT, care General Manager, Pennsylvania Railroad, Broad Street Station, Philadelphia, Pa.

(P) Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, care Philadelphia and Reading Coal and Iron Company, Pottsville, Pa.

#### TEXAS.

(D) Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin, Tex.

#### VIRGINIA.

(P) Experiments in grading and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, Norfolk, Va.

#### WASHINGTON.

(P) Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle, Wash.

(P) Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma, Wash.

#### WISCONSIN.

(M) Supervision of timber cutting and marking of timber for cutting on Indian reservations, in cooperation with Office of Indian Affairs—W. G. WEIGLE, Ashland, Wis.

#### WYOMING.

(M) Examination of proposed timber sales, Yellowstone Forest Reserve—I. T. WORTHLEY, Wapiti, Wyo.

### REGIONAL STUDIES.

#### EASTERN STATES.

(M) Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

#### MIDDLE WESTERN STATES.

(M) Examination of woodlots and timber tracts, in cooperation with landowners—S. J. RECORD, Crawfordsville, Ind.

### GENERAL STUDIES.

(E) Study of planting on forest reserves—L. C. MILLER, Washington, D. C.

(E) Investigations of coniferous seeds, in cooperation with the Seed Testing Laboratory—E. O. SIECKE, Washington, D. C.

(E) Preliminary studies for investigations of city watersheds within forest reserves—W. J. GARDNER, Washington, D. C.

(E) Cooperative work with railroads and individual land owners in the Middle West—S. N. SPRING, 2838 North Hermitage avenue, Chicago, Ill.

(P) Collection of statistics of forest products for year 1905—R. S. KELLOGG and H. M. HALE, Washington, D. C.; GEO. K. SMITH, Equitable Building, St. Louis, Mo.

(P) Study of woods used in the cooperage industry—J. J. LEVISON, Augusta, Ark.

(P) Study of woods used in the vehicle and implement industry—H. B. HOLROYD, Washington, D. C.

(P) Study of woods used for street paving—C. L. HILL, Washington, D. C.

(P) Study of woods used for box and basket purposes—J. P. WENTLING, Washington, D. C.

(P) Study of methods of kiln drying—FREDERICK DUNLAP, Washington, D. C.

(P) Study of lumber prices—MANASSEH SMITH, JR., Washington, D. C.

(P) Study of utilization of dead timber on forest reserves—E. R. HODSON and J. D. WARNER, Washington, D. C.

## FOREST RESERVES.

### ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

### ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise, Ariz.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott, Ariz.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Globe, Ariz.; W. W. CLARK, Assistant Forest Inspector, Globe, Ariz.

### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Tahoe Forest Reserve—D. B. SELLER, Forest Superintendent in Charge, Nevada City, Cal.; JNO. C. WELLS, Forest Ranger, Nevada City, Cal.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Modoc Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.



Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; J. REBMANN, Forest Assistant, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve (McCloud Division)—J. H. HATTON, Forest Inspector in Charge, Sisson, Cal.

Shasta Forest Reserve (Western Division)—R. L. P. BIGELOW, Forest Ranger in Charge, Weaverville, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTON, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Ranger in Charge, Sonora, Cal.; JOHN C. WELLS, Forest Ranger, Bridgeport, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaverville, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Yuba Forest Reserve—D. B. SELLER, Forest Superintendent in Charge, Nevada City, Cal.

#### COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Holy Cross Forest Reserve—SHEP. N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Montezuma Forest Reserve—F. A. SILCOX, Assistant Forest Inspector in Charge, Durango, Colo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—FRANK R. SHERWIN, Forest Ranger in Charge, Denver, Colo.; G. E. CLEMENT, Forest Assistant, Denver, Colo.; W. D. EDMONSTON, Forest Ranger, Larkspur, Colo.

San Isabel Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Durango, Colo.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Montrose, Colo.

Wet Mountains Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Priest River, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Weiser Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

#### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. McKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMPKINS and H. A. BLILER, Forest Agents, Cass Lake, Minn.

#### MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Gallatin Forest Reserve—MICHAEL LANGOHR, Forest Supervisor, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Ovando, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Tony, Mont.

#### NEW MEXICO.

Gila Forest Reserve—R. C. McCLURE, Forest Supervisor, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Jemez Forest Reserve—M. L. ERICKSON, Assistant Forest Inspector in Charge, Santa Fe, N. Mex.

Lincoln Forest Reserve—JOHN KERR, Forest Ranger in Charge, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Ranger in Charge, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.

#### OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.

#### OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Baker City Forest Reserve—S. S. TERRELL, Forest Supervisor, Sumpter, Oreg.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.



Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Ranger in Charge, Prineville, Oreg.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver, Utah.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

Logan Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Ranger in Charge, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah; J. H. RAMSKILL, Forest Assistant, Parowan, Utah.

Uinta Forest Reserve—D. S. MARSHALL, Forest Supervisor, Kamas, Utah.

#### WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspoint, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

#### WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn, Wyo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Wapiti, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY W. THURSTON, Forest Ranger, Marquette, Wyo.

## SERVICE CHANGES IN MARCH.

## APPOINTED.

VERNON BAILEY, Chief Field Naturalist, \$2,400 per annum; by transfer from the Bureau of Biological Survey.

MILTON J. McVEAN, Clerk, \$1,600 per annum; by transfer from the General Land Office.

THOS. G. GARVIN, Expert, \$1,500 per annum.

W. JONES BOWEN, Forest Supervisor, \$1,400 per annum; assigned to Uinta Forest Reserve, Utah.

MADISON B. ELLIOTT, Forest Supervisor, \$1,400 per annum; assigned to the Tahoe and Yuba forest reserves, California.

Miss LAURA R. GARTRELL, Clerk, \$700 per annum.

Miss CELIA B. KUNTZ, Clerk, \$700 per annum.

The following persons were appointed Assistant Forest Rangers at \$900 per annum, upon certification by the Civil Service Commission:

GEO. H. BIRDNO, Mount Graham Forest Reserve, Arizona.

CONRAD ALLES and A. E. REDSTONE, Sierra Forest Reserve (North), California.

B. O. LOVELACE, Stanislaus Forest Reserve, California.

A. C. KELLER, San Bernardino Forest Reserve, California.

W. H. BABBITT, San Gabriel Forest Reserve, California.

JOHN CLINE, ARTHUR G. HICKS, and C. W. SHELLABARGER, Cochetopa Forest Reserve, Colorado.

S. O. PROFFITT and C. A. MACK, Leadville Forest Reserve, Colorado.

E. H. WAGNER, San Isabel Forest Reserve, Colorado.

BERNARD J. DUFFY, Uncompahgre Forest Reserve, Colorado.

E. W. GRIBBLE and J. D. WALLACE, Cascade Forest Reserve (North), Oregon.

S. E. HENRIE and J. H. DE LONG, Beaver Forest Reserve, Utah.

JNO. H. CLARK, Sevier Forest Reserve, Utah.

ISAAC N. DECKER, Gunnison Forest Reserve, Colorado.

The following persons were appointed Forest Guards at \$720 per annum:

J. N. REYNOLDS and GEO. E. VILES, Pecos Forest Reserve, New Mexico.

STEPHEN EASTON, Jemez Forest Reserve, New Mexico.

C. G. Y. HIGGINS, Dixie Forest Reserve, Utah.

WALTER A. FAY, Chesnimnus Forest Reserve, Oregon.

JAMES TAYLOR, Medicine Bow Forest Reserve, Colorado.

WM. X. GARRETT, Trinity and Klamath forest reserves, California.

## PROMOTED.

DAVID ANDERSON, Forest Ranger at \$1,000, to Ranger in Charge at \$1,200; assigned to the Battlement Mesa Forest Reserve, Colorado; promotion made for efficiency.

R. L. P. BIGELOW, Ranger in Charge at \$1,400, to Forest Supervisor at \$1,600; assigned to Klamath Forest Reserve, California; promotion made for efficiency. To take effect April 1.

JOHN H. PATTERSON, Assistant Forest Ranger at \$900, to Deputy Forest Ranger at \$1,000; assigned to Pikes Peak Forest Reserve, Colorado; promotion made for efficiency.

EDWARD S. MAINWARING, Deputy Forest Ranger at \$900, to Ranger in Charge at \$1,400; assigned to Trinity Forest Reserve, California; promotion made for efficiency.

F. D. WHITNEY, Forest Ranger at \$1,000, to Forest Ranger at \$1,200; promotion made for efficiency.

Miss LULU BROWER, Clerk, from \$600 to \$720 per annum; promotion made for efficiency and to fill vacancy on statutory roll.



Miss M. L. HOBGOOD, Clerk, from \$480 to \$600 per annum ; promotion made for efficiency and to fill vacancy on statutory roll.

Miss MAUDE E. ELLIS, Telephone Operator, from \$480 to \$600 per annum ; promotion made for efficiency.

GRANT P. SMITH, unskilled laborer, from \$500 to \$560 ; promotion made in view of additional labor.

The following Assistant Forest Rangers were promoted from \$720 to \$900 per annum, in accordance with Forest Reserve Order No. 18:

L. D. HURT, Washington Forest Reserve (West), Washington.

JOHN B. SENEAL, Cascade Forest Reserve (North), Oregon.

CHARLES SMITH, White River Forest Reserve, Colorado.

J. G. TURNBOW, Uinta Forest Reserve, Utah.

#### RESIGNED FROM THE SERVICE.

JNO. G. NEIDHARDT, Forest Ranger, Leadville Forest Reserve, Colorado.

FRANK L. CALKINS, Assistant Forest Ranger, Cascade Forest Reserve (South), Oregon.

OSCAR B. BUNCH, Assistant Forest Ranger, Cascade Forest Reserve (South), Oregon.

CHAS. J. C. AUCOIN, Messenger.

Miss HAZEL V. ANDERSON.

WALTER J. MOSENTHAL, Forest Student.

#### RESIGNATION ACCEPTED.

A. B. LACEY, Assistant Forest Ranger, Cascade Forest Reserve (North), Oregon.

A. R. CRAIG, Forest Supervisor, Battlement Mesa Forest Reserve, Colorado.

F. G. CONNELLY, Assistant Forest Ranger, Cascade Forest Reserve (South), Oregon.

JAMES H. HOBBS, Assistant Forest Ranger, Cascade Forest Reserve (South), Oregon.

GEO. W. STONE, Assistant Forest Ranger, White River Forest Reserve, Colorado.

BENJ. F. JAY, Forest Ranger, Battlement Mesa Forest Reserve, Colorado.

THOS. W. PRITCHARD, Expert.

#### REMOVED FROM THE SERVICE.

CLEMENT HIGHTOWER, Supervisor, Lincoln Forest Reserve, New Mexico.

FRANK BARNES, Forest Ranger, Battlement Mesa Forest Reserve, Colorado.

HOWARD R. SHERMAN, Assistant Forest Ranger, Pikes Peak Forest Reserve, Colorado.

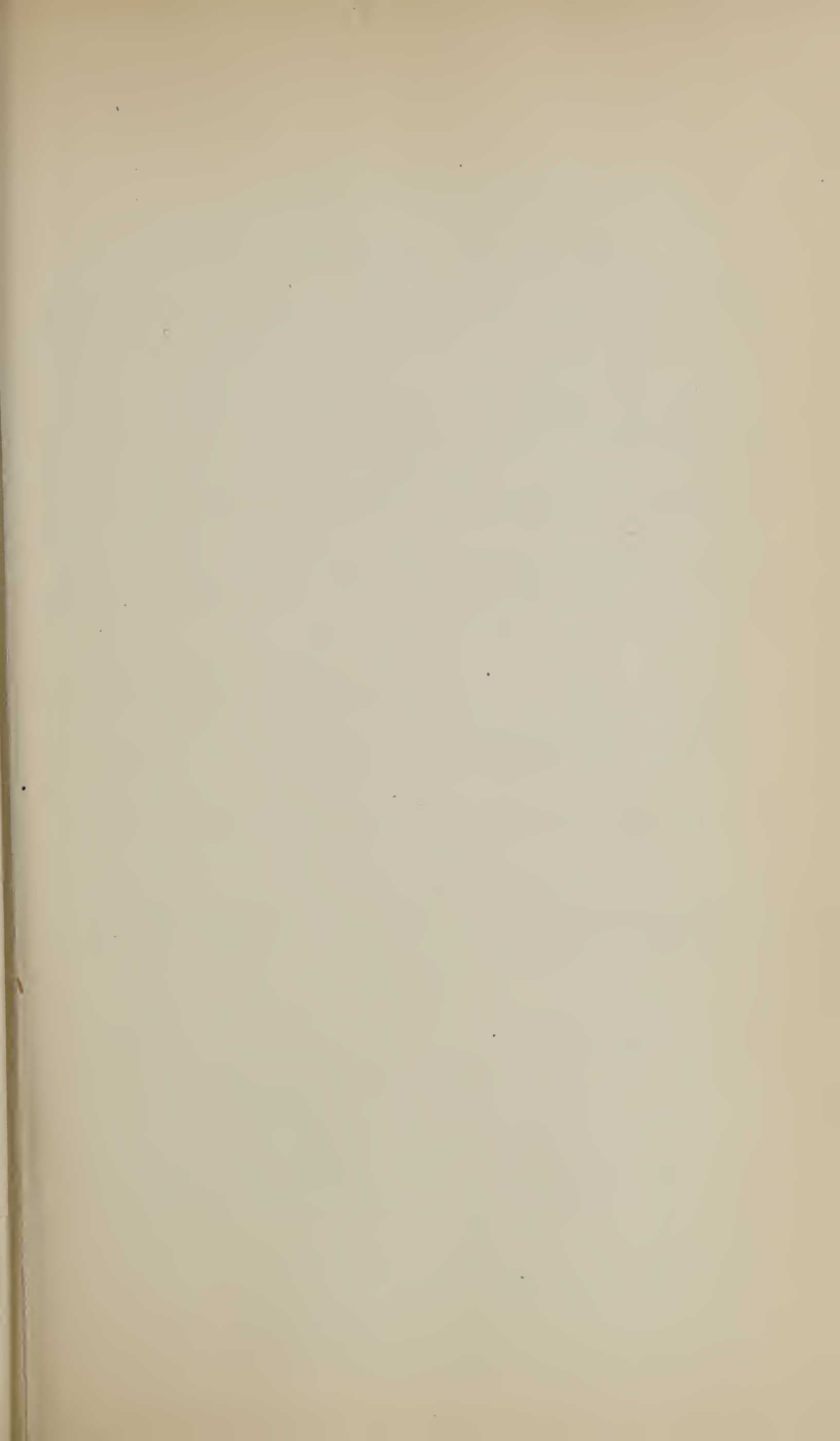
YSIDRO L. SOTO, Assistant Forest Ranger, San Bernardino Forest Reserve, California.

#### SUSPENDED.

JAMES H. CLARKE, Forest Supervisor, Pikes Peak Forest Reserve, Colorado.

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The criminal proceedings brought against former Forest Supervisor Everett B. Thomas, of the San Bernardino and San Gabriel forest reserves, with headquarters at Los Angeles, Cal., resulted in his conviction on ten of the fifteen counts secured against him last fall. His accounts, for a period of over three years, had been constantly falsified. On March 20 he was sentenced to three years' imprisonment at hard labor, with a fine of \$7,000.







# United States Department of Agriculture,

## FOREST SERVICE,

GIFFORD PINCHOT, Forester.

### FIELD PROGRAMME FOR MAY, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are indefinite and reference to projects for which plans have not been matured are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

Work conducted under the direction of the Forester is designated (F); Forest Management (M); Dendrology (D); Forest Products (P); Forest Extension (E).

#### ADMINISTRATION.

GIFFORD PINCHOT, *Forester.*

OVERTON W. PRICE, *Associate Forester.*

THOMAS H. SHERRARD, *Assistant Forester in Charge of Forest Management.*

GEO. B. SUDWORTH, *Assistant Forester in Charge of Dendrology.*

WILLIAM L. HALL, *Assistant Forester in Charge of Forest Products.*

E. A. STERLING, *Assistant Forester in Charge of Forest Extension.*

JAMES B. ADAMS, *Special Fiscal Agent.*

G. G. ANDERSON, *in Charge of Records.*

HERBERT A. SMITH, *in Charge of Section of Publication and Education.*

G. W. WOODRUFF, *in Charge of Section of Law.*

A. F. POTTER, *in Charge of Section of Grazing.*

RAPHAEL ZON, *in Charge of Section of Silvics.*

F. W. REED, *in Charge of Section of Reserve Boundaries.*

COERT DUBOIS, *Forest Inspector, detailed as District Forester, Western District.*

E. E. CARTER, *Forest Inspector, detailed as District Forester, Southern District.*

ELERS KOCH, *Forest Inspector, detailed as District Forester, Northern District.*

#### FIELD WORK.

##### INSPECTION.

##### *Office of the Forester:*

F. E. OLMSTED, *Assistant Forester in Charge of General Inspection.*

E. T. ALLEN, *Forest Inspector, Sacramento, Cal.*

R. H. CHARLTON, *Forest Inspector, Washington, D. C.*

R. E. BENEDICT, *Forest Inspector, Provo, Utah.*

SMITH RILEY, *Forest Inspector, Glenwood Springs, Colo.*

JOHN H. HATTON, *Forest Inspector, Sacramento, Cal.*

W. T. COX, *Assistant Forest Inspector, Sacramento, Cal.*

W. W. CLARK, *Assistant Forest Inspector, Salt Lake City, Utah.*

F. W. REED, *Assistant Forest Inspector, Pocatello, Idaho.*

W. C. HODGE, JR., *Assistant Forest Inspector, Washington, D. C.*

##### *Forest Management:*

A. K. CHITTENDEN, *Forest Inspector in Charge of Technical Inspection, Kalispel, Mont.*

W. B. GREELEY, *Forest Inspector, 180 Perry street, Oakland, Cal.*

A. W. COOPER, *Forest Inspector.*

P. G. REDINGTON, *Forest Inspector, Cody, Wyo.*

K. W. WOODWARD, *Assistant Forest Inspector, Santa Fe, N. Mex.*



*Forest Management—Continued.*

J. S. HOLMES, *Assistant Forest Inspector*, Silver City, N. Mex.

G. M. HOMANS, *Assistant Forest Inspector*, Portland, Oreg.

C. A. LYFORD, *Assistant Forest Inspector*, Cheshire House, Keene, N. H.

A. B. PATTERSON, *Assistant Forest Inspector*, Pine Bluff, Ark.

E. S. BRUCE, *Expert Lumberman, in Charge of Inspection of Logging*, Flagstaff, Ariz.

W. E. LA FOUNTAIN, *Assistant Forest Inspector*, Sheridan, Wyo.

E. M. HAMILTON, *Expert*, Deadwood, S. Dak.

*Forest Products:*

HENRY GRINNELL, *Assistant Forest Inspector*.

M. CLINE, *Engineer of Timber Tests*, New Haven, Conn.

*Forest Extension:*

G. B. LULL, *Assistant Forest Inspector*, Hotel Lillie, Los Angeles, Cal.

## ARIZONA.

(E) Preparation of planting plan for lands in the Salt River Project, in cooperation with the Reclamation Service—J. M. FETHEROFF, Roosevelt, Ariz.

## CALIFORNIA.

(M) Market study of commercial species—M. B. PRATT, care W. B. GREELEY, 180 Perry street, Oakland, Cal.

(M) Examination of proposed cuttings, Klamath and Trinity forest reserves—C. J. BUCK and W. G. DURBIN, Yreka, Cal.

(M) Examination of proposed cuttings, Tahoe Forest Reserve—F. G. PLUMMER, care W. B. GREELEY, 180 Perry street, Oakland, Cal.

(M) Examination of proposed cuttings, Sierra Forest Reserve—M. B. PRATT, Southern Hotel, Bakersfield, Cal.; assistant, J. F. ELDREDGE.

(M) Examination of proposed cuttings, Shasta Forest Reserve—P. T. HARRIS, Sisson, Cal.

(D) Study of tanbark oaks of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley, Cal.

(D) Special studies of California trees, four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY; permanent address, Stanford University, Cal.

(E) Study of planted timber and of State forest lands, in cooperation with the State—S. J. FLINTHAM, Hotel Hollenbeck, Los Angeles, Cal.

(E) Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, B. R. H. D'ALLEMAND, Santa Barbara, Cal.

(E) Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, S. Y. PARNAY.

(P) Tests of the strength of eucalyptus wood, in cooperation with University of California—L. E. HUNT, Berkeley, Cal.; assistant, A. J. CLEARY.

(P) Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in southern California—W. R. WHEATON, Hotel Lillie, Los Angeles, Cal.; assistant, O. T. SWAN.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Reno, Nev.; assistants, S. G. SMITH, Independence, Cal.; R. W. AYRES, Hotel Hollenbeck, Los Angeles, Cal.; and L. VON WERNSTEDT, Hotel Hollenbeck, Los Angeles, Cal.

## COLORADO.

(E) Nursery and planting work, Pikes Peak Forest Reserve—F. W. BESLEY, Colorado Springs, Colo.

## CONNECTICUT.

(P) Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven, Conn.; assistant, CORNELIUS BARRY.

(E) Preparation of planting plan for Bridgeport Hydraulic Company, and miscellaneous planting plans in New England—J. F. BOND, Bridgeport, Conn.

(P) Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven, Conn.

## DISTRICT OF COLUMBIA.

(P) Plans for timber treating and testing laboratory in Washington, D. C.—C. G. CRAWFORD, Washington, D. C.; and S. M. ROWE, Chicago, Ill.

## FLORIDA.

(D) Improved methods of turpentineing, experimental pine forests, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs, Fla.

## HAWAII.

(E) Examination of lands for insular forest reserves—R. S. HOSMER, Washington, D. C.

## INDIANA.

(P) Timber testing at Lafayette, Ind., in cooperation with Purdue University—Dr. W. K. HATT, Lafayette, Ind.; assistants, H. D. HARTLEY, O. P. M. GOSS, H. S. BETTS, and T. A. NEWLIN.

## MARYLAND.

(F) Location of permanent sample plots—W. D. STERRET, R. F. D. No. 2, Berlin, Md.; assistants, R. WHITEKNECHT and W. D. CLARK.

(P) Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton, Md.

(D) Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

## MASSACHUSETTS.

(M) Woodlot and timber-tract examinations, in cooperation with the State—ALFRED AKERMAN, State Forester, Boston, Mass.

(P) Experiments to determine the value of various woods for pulp—A. D. LITTLE, 93 Broad street, and H. S. BRISTOL, 74 Pinckney street, Boston, Mass.

## MICHIGAN.

(P) Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and Wisconsin Central railroad companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba, Mich.; assistants, C. S. SMITH and C. E. FEAGIN.

## MISSISSIPPI.

(E) Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College, Miss.

## MONTANA.

(M) Examination of proposed cuttings, Bitter Root Forest Reserve—E. J. CLAPP, care E. A. SHERMAN, Missoula, Mont.

## NEBRASKA.

(E) Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey, Nebr.; assistants, W. H. MAST, E. O. SIECKE, and LAMORE BESLEY.

## NEVADA.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Reno, Nev.; assistants, R. B. WILSON, Carson, Nev.; CLYDE LEAVETT and H. O. STABLER, Austin, Nev.

## NEW HAMPSHIRE.

(M) Study of woodlot and forest conditions in southern New Hampshire, in cooperation with the State—L. MARGOLIN, Cheshire House, Keene, N. H.; assistants, A. T. BOISEN, B. MACKAYE, W. C. LATANE, JR., and J. A. FITZWATER.

## NEW MEXICO.

(E) Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard, N. Mex.; assistant, W. B. HADLEY.

(P) Study of uses of dead timber, Pecos River Forest Reserve—E. R. HODSON and J. D. WARNER, Santa Fe, N. Mex.



(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Reno, Nev.; assistant, R. V. R. REYNOLDS, Espanola, N. Mex.

#### NORTH CAROLINA.

(D) Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON; permanent address, Chapel Hill, N. C.

#### OREGON.

(P) Tests of the strength of red fir, in cooperation with University of Oregon—J. F. KNAPP, Eugene, Oreg.

#### PENNSYLVANIA.

(E) Preliminary study, in cooperation with the Pennsylvania Railroad Company, to determine a forest policy for the company—R. C. BRYANT, care General Manager, Pennsylvania Railroad, Broad Street Station, Philadelphia, Pa.

(P) Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, JR., care Philadelphia and Reading Coal and Iron Company, Pottsville, Pa.

#### SOUTH DAKOTA.

(M) Examination of proposed cutting of insect-killed timber, Black Hills Forest Reserve—H. C. NEEL, Deadwood, S. Dak.

#### TEXAS.

(D) Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin, Tex.

#### VIRGINIA.

(P) Experiments in grading and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, Norfolk, Va.

#### WASHINGTON.

(P) Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle, Wash.

(P) Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma, Wash.

#### WISCONSIN.

(M) Supervision of timber cutting and marking of timber for cutting on Indian reservations, in cooperation with Office of Indian Affairs—W. G. WEIGLE, Ashland, Wis.

#### WYOMING.

(M) Examination of proposed timber sales, Yellowstone Forest Reserve—I. T. WORTHLEY, Wapiti, Wyo.

### REGIONAL STUDIES.

#### EASTERN STATES.

(M) Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

#### MIDDLE WESTERN STATES.

(M) Examination of woodlots and timber tracts, in cooperation with landowners—S. J. RECORD, Crawfordsville, Ind.

### GENERAL STUDIES.

(E) Study of planting on forest reserves—L. C. MILLER, Washington, D. C.

(E) Preliminary investigations of city watersheds within forest reserves—W. J. GARDNER, Globe, Ariz.

(E) Cooperative work with railroads and individual landowners in the Middle West—S. N. SPRING, 2838 North Hermitage avenue, Chicago, Ill.

(P) Collection of statistics of forest products for year 1905—R. S. KELLOGG and H. M. HALE, Washington, D. C.; GEO. K. SMITH, Equitable Building, St. Louis, Mo.

(P) Study of woods used in the slack-cooperage industry—J. J. LEVISON, Augusta, Ark.

(P) Study of woods used in the vehicle and implement industry—H. B. HOLROYD, Lafayette, Ind.

(P) Study of woods used for street paving—C. L. HILL, Washington, D. C.

(P) Study of woods used for box making—J. P. WENTLING, Washington, D. C.

(P) Study of methods of kiln drying—FREDERICK DUNLAP, Washington, D. C.

(P) Study of waste in lumber manufacture—ALFRED GASKILL, Washington, D. C.

## FOREST RESERVES.

### ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

### ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise, Ariz.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott, Ariz.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Globe, Ariz.; W. W. CLARK, Assistant Forest Inspector, Globe, Ariz.

### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka, Cal.

Tahoe Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.; JNO. C. WELLS, Forest Ranger, Nevada City, Cal.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Modoc Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; J. REBMANN, Forest Assistant, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve (McCloud Division)—R. L. P. BIGELOW, Forest Supervisor, Yreka, Cal.

Shasta Forest Reserve (Trinity Division)—C. S. MAINWARING, Forest Ranger in Charge, Weaverville, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTON, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.



Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Ranger in Charge, Sonora, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaver-ville, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Ranger in Charge, Alturas, Cal.

Yuba Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.

#### COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Holy Cross Forest Reserve—SHEP. N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango, Colo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—FRANK R. SHERWIN, Forest Ranger in Charge, Denver, Colo.; G. E. CLEMENT, Forest Assistant, Denver, Colo.; W. D. EDMONSTON, Forest Ranger, Larkspur, Colo.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Moffatt, Colo.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Durango, Colo.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Montrose, Colo.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Moffatt, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Priest River, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Weiser Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

#### KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

#### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. MCKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMPKINS and H. A. BLILER, Forest Agents, Cass Lake, Minn.

## MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Gallatin Forest Reserve—MICHAEL LANGOIR, Forest Supervisor, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Ovando, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Tony, Mont.

## NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

North Platte Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

## NEW MEXICO.

Gila Forest Reserve—R. C. MCCLURE, Forest Supervisor, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Jeanez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.

Lincoln Forest Reserve—JOHN KERR, Forest Ranger in Charge, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.

## OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.

## OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.; A. E. COHOON, Forest Assistant, Marmot, Oreg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.

Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.; Henry IRELAND, Deputy Ranger, Prineville, Oreg.

Blue Mountains Forest Reserve (Eastern Division)—D. B. SHALLER, Forest Superintendent in Charge, Baker City, Oreg.; S. S. TEWELL, Forest Supervisor, Baker City, Oreg.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.



Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver, Utah.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

Logan Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Ranger in Charge, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah; J. H. RAMSKILL, Forest Assistant, Parowan, Utah.

Uinta Forest Reserve—D. S. MARSHALL, Forest Supervisor, Kamas, Utah.

#### WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspoint, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

#### WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn, Wyo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Wapiti, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY W. THURSTON, Forest Ranger, Marquette, Wyo.

### SERVICE CHANGES IN APRIL.

#### APPOINTED.

THOMAS ELMER WILL, Clerk, \$1,500 per annum; assigned to Section of Publication and Education.

HERBERT N. WHEELER, Forest Supervisor, \$1,400 per annum; assigned to the Montezuma Forest Reserve, Colorado.

EUGENE WILLIAMS, Forest Supervisor, \$1,400 per annum; assigned to the San Isabel and Wet Mountains forest reserves, Colorado.

DAVID T. CONKLING, Deputy Forest Ranger, \$1,200 per annum; assigned to the Hell Gate Forest Reserve, Montana.

J. B. LAFFERTY, Deputy Forest Ranger, \$1,000 per annum; assigned to the Sawtooth Forest Reserve, Idaho.

M. N. ANDERSON, Clerk, \$1,000 per annum; assigned to Section of Accounts.  
W. J. MANGAN, Clerk, \$900 per annum; assigned to Section of Files, Stenography, and Typewriting.

SILAS C. MASON, Collaborator, \$300 per annum.

ALBERT MORRIS, Shipping Clerk, \$600 per annum.

M. M. WEANING, Clerk, \$600 per annum.

H. E. FELDER, Clerk, \$600 per annum.

R. RHODE, Clerk, \$600 per annum.

G. LEONARD, Clerk, \$600 per annum.

Mrs. BINA MANDERFELD, Clerk, \$600 per annum.

Miss EDITH GORDON, Clerk, \$600 per annum.

Miss ROSEMARY RHODE, Clerk, \$600 per annum.

S. L. McLAURIN, Clerk, \$600 per annum.

Miss M. G. THOMPSON, Clerk, \$600 per annum.

Miss M. HALLAM, Clerk, \$600 per annum.

Miss ELIZABETH LEECH, Clerk, \$480 per annum.

Miss GRACE FRANCIS, Clerk, \$480 per annum.

W. D. HOLLAND, Messenger, \$600 per annum.

J. ALBERT HICKEY, Messenger, \$360 per annum.

WALLACE L. SUDLER, Messenger, \$360 per annum.

The following persons were appointed Assistant Forest Rangers at \$900 per annum, upon certification by the Civil Service Commission:

ORLANDO HEDRICK, THOMAS F. HOWELL, and MARTIN H. ADAMS, Lassen Peak Forest Reserve, California.

ALBERT S. HAPNER, RHESIS FRANSAM, HORACE A. CLEVELAND, SAMUEL R. HAYES, and FRED E. AINGER, Gallatin Forest Reserve, Montana.

ELMER E. CHAPSON, CLARENCE E. BRADT, CHARLES A. WHITNEY, DAVID E. FITTON, and ALFRED L. STRAWN, San Juan Forest Reserve, Colorado.

RICHARD N. BRADLEY and FRED K. WYMAN, Lewis and Clark Forest Reserve (South), Montana.

GEORGE W. CHAMBERLAIN and AUSTIN E. DALBY, Plumas Forest Reserve, California.

HARVEY ABBEY, Diamond Mountain Forest Reserve, California.

HARRY E. WHITE, San Gabriel Forest Reserve, California.

ERNEST E. FISHEL, Olympic Forest Reserve, Washington.

RICHARD A. T. DORWALT, Alexander Archipelago Forest Reserve, Alaska.

JAMES J. LOWELL and ROY R. WHITE, Montezuma Forest Reserve, Colorado.

JOHN E. WHILT, Wenaha Forest Reserve, Washington.

HERBERT G. MCPHETERS, Sawtooth Forest Reserve, Idaho.

CLARENCE E. COLES, FRED E. EVANS, and RALPH S. SHELLY, Cascade Forest Reserve (North), Oregon.

OLUF G. NEILSON, Fish Lake Forest Reserve, Utah.

ARTHUR B. SAY, Pocatello Forest Reserve, Idaho.

EDWARD C. THENON, Bitter Root Forest Reserve, Idaho.

JAMES W. STEVENS and LEWIS E. JOHNSON, San Francisco Mountains Forest Reserve, Arizona.

NATHAN E. SNELL, GEORGE A. FISHER, LOUIS J. WORKMAN, and HORACE H. STEVENS, Uinta Forest Reserve, Utah.

D. W. MARRYOTT and ABEL C. BURGLUND, Big Belt Forest Reserve, Montana.

JULIAN A. KNIGHT, Madison Forest Reserve, Montana.

JOSEPH W. HUMPHREY, Manti Forest Reserve, Utah.

JOSEPH C. MADSEN, Payson Forest Reserve, Utah.

FRANK W. SEAMAN, Sevier Forest Reserve, Utah.

The following persons were appointed Forest Guards at \$720 per annum:

HEPPLER P. SHOCKLEY, Niobrara Forest Reserve, Nebraska.

JULIAN JOURNIGAN and R. D. HALE, Tonto Forest Reserve, Arizona.

GEORGE W. BROADHURST and THOMAS E. CHAPLIN, Medicine Bow Forest Reserve, Wyoming.

ARTHUR H. ZACHAU, Prescott Forest Reserve, Arizona.

WALTER G. MUSICK, KENNETH C. SOOYSMITH, ALVA R. MEEK, JOSEPH W. REID, LUTHER F. POLLOCK, ALBERT B. BRYANT, PHILIP JAGLES, and DANIEL LINTHICUM, Gila Forest Reserve, New Mexico.

GEORGE HOLLISTER, J. S. SIVERTSON, H. H. PEREGOY, W. GIBBONS, and ROY GILMORE, Sierra Forest Reserve (North), California.

WILLIAM M. MENDENHALL, Pikes Peak Forest Reserve, Colorado.



JOSEPH M. MELROSE, Montezuma Forest Reserve, Colorado.  
 J. B. RUSK, Jemez Forest Reserve, New Mexico.  
 JOHN GILMAN, CLAYTON SIMONS, F. W. STAHLMAN, J. F. DIBBLE, and P. C. BONNEY, Cascade Forest Reserve (North), Oregon.  
 BALLARD R. GARRETT, Trinity Forest Reserve, California.  
 JOHN DALY, Mount Graham Forest Reserve, Arizona.  
 C. E. ROWE, Holy Cross Forest Reserve, Colorado.  
 ALBERT WHITNEY, Park Range Forest Reserve, Colorado.  
 MOSES K. WESTON and THOMAS P. MACKENZIE, Wenaha Forest Reserve, Washington.  
 THOMAS W. SLOAN, LEWIS H. ANDERSON, ALEXANDER H. TYLER, and JOSEPH J. STREBY, San Gabriel Forest Reserve, California.  
 JAMES BAILEY, EWING DE FOREST, ALLEN STRICKLIN, WILLIAM H. ROPER, and GEORGE MORSE, San Francisco Mountains Forest Reserve, Arizona.  
 R. L. PELZ and JOHN HOPPINS, Black Hills Forest Reserve, South Dakota.  
 JOHN C. WHEATLEY and FRANK HUFF, Black Mesa Forest Reserve, Arizona.  
 WALTER F. BROUGH, Payson Forest Reserve, Utah.

#### RESTORED TO DUTY FROM FURLOUGH.

SAMUEL T. DAVIS, Forest Ranger, Priest River Forest Reserve, Idaho.  
 BYRON W. HENNINGS, Assistant Forest Ranger, Lewis and Clarke Forest Reserve (North), Montana.  
 B. B. HOLLAND, Deputy Forest Ranger, and HENRY WALDREF, Assistant Forest Ranger, Lewis and Clarke Forest Reserve (South), Montana.  
 WILLIAM A. MCCULLOUGH, Assistant Forest Ranger, Mount Rainier Forest Reserve, Washington.  
 HIRAM H. MCNEIL, Assistant Forest Ranger, and CHARLES R. SCOFIELD, Deputy Forest Ranger, Washington Forest Reserve (East), Washington.  
 WILFORD PACE, Assistant Forest Ranger, Fish Lake Forest Reserve, Utah.  
 L. D. HURT, Forest Ranger, Washington Forest Reserve (West), Washington.  
 JOHN DYKE and EMERY J. FINCH, Assistant Forest Rangers, Olympic Forest Reserve, Washington.  
 CHAS. R. SCHOFIELD, Assistant Forest Ranger, Washington Forest Reserve, Washington.  
 ILA C. NEILEIGH and D. C. POWELL, Assistant Forest Rangers, Cascade Forest Reserve (North), Oregon.  
 WALTER E. HANKS and JOSEPH J. PORTER, Assistant Forest Rangers, Aquarius Forest Reserve, Utah.  
 GEORGE CROW, Assistant Forest Ranger, San Gabriel Forest Reserve, California.  
 SHELTON I. MCPHERSON, Assistant Forest Ranger, Bitter Root Forest Reserve, Idaho.

#### PROMOTED.

R. L. P. BIGELOW, Klamath Forest Reserve, California, from Ranger in Charge at \$1,400 to Forest Supervisor at \$1,600 per annum.  
 L. F. KNEIPP, from Ranger in Charge of the Pecos River Forest Reserve at \$1,080 to Supervisor of the Pecos River and Jemez forest reserves, New Mexico, at \$1,500 per annum.  
 A. S. IRELAND, from Ranger in Charge of the Maury Mountains Forest Reserve at \$1,080 to Supervisor of the Maury Mountains and Blue Mountains forest reserves, Oregon, at \$1,200 per annum.  
 ALBERT B. CLAFLIN, Lewis and Clark Forest Reserve (North), Montana, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,100 per annum.  
 JAMES G. THAIN, Forest Supervisor, Highwood Mountains Forest Reserve, Montana, from \$900 to \$1,100 per annum.  
 W. C. ROBINSON, Plumas Forest Reserve, California, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.  
 JOSEPH C. EASTLAND, Lewis and Clark Forest Reserve (North), Montana, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.  
 JOHN H. PATTERSON, Pikes Peak Forest Reserve, Colorado, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.  
 ROBERT W. FLOURNOY, Diamond Mountain Forest Reserve, California, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.  
 HENRY IRELAND, Blue Mountains Forest Reserve (West), Oregon, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.

J. G. LA PLANT, Lassen Peak Forest Reserve, California, from Assistant Forest Ranger at \$900 to Forest Ranger at \$1,200 per annum.

GEORGE H. ALEN, Assistant Forest Ranger, San Gabriel Forest Reserve, California, from \$720 to \$900 per annum.

LOUIS FITTING, Assistant Forest Ranger, Bitter Root Forest Reserve, Idaho, from \$720 to \$900 per annum.

H. D. BROWN, Messenger, from \$600 to \$700 per annum; promotion made for efficiency and to fill vacancy on statutory roll.

#### FURLOUGHED.

RAYMOND TYLER, Deputy Forest Ranger, Sierra Forest Reserve (North), California.

#### RESIGNED FROM THE SERVICE.

MICHAEL LANGOHR, Forest Supervisor, Gallatin Forest Reserve, Montana.

FRANK J. RYDER, Assistant Forest Ranger, Hell Gate Forest Reserve, Montana.

WILLIAM STANTON, Assistant Forest Ranger, Sierra Forest Reserve (South), California.

A. HARVEY JAMISON, Assistant Forest Ranger, Bitter Root Forest Reserve, Idaho.

GEORGE W. NAY, Forest Guard, Park Range Forest Reserve, Colorado.

GEORGE F. WILLIAMS, Deputy Forest Ranger, Gila Forest Reserve, New Mexico.

JULIUS HENRICH, Assistant Forest Ranger, Yellowstone Forest Reserve (Wind River Division), Wyoming.

G. W. GOSHEN, Messenger.

#### RESIGNATION ACCEPTED.

PETER G. PETERSON, Forest Guard, Yellowstone Forest Reserve (Teton Division), Wyoming.

F. W. SNODGRASS, Forest Guard, San Gabriel Forest Reserve, California.

LORUM PRATT, JR., Assistant Forest Ranger, Grand Canyon Forest Reserve (North), Arizona.

#### REDUCED IN RANK.

O. V. HICKMAN, Assistant Forest Ranger, Cascade Forest Reserve (North), Oregon, from \$900 to \$720 per annum; reduction made as a disciplinary measure.

#### REMOVED FROM THE SERVICE.

THOMAS G. ROACH, Forest Ranger, Prescott Forest Reserve, Arizona.

R. W. MOLTER, Forest Ranger, Black Mesa Forest Reserve, Arizona.

#### SUSPENDED.

CLAUDE M. JOHNSON, Deputy Forest Ranger, Washington Forest Reserve, Washington.

With deep regret, announcement is made of the death, on April 26, 1906, of GEORGE C. BOLAND, Assistant Forest Ranger, Black Hills Forest Reserve.





# United States Department of Agriculture,

## FOREST SERVICE,

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAMME FOR JUNE, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are indefinite and reference to projects for which plans have not been matured are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

Work conducted under the direction of the Forester is designated (F) ; Forest Management (M) ; Dendrology (D) ; Forest Products (P) ; Forest Extension (E).

#### ADMINISTRATION.

GIFFORD PINCHOT, *Forester.*

OVERTON W. PRICE, *Associate Forester.*

THOMAS H. SHERRARD, *Assistant Forester in Charge of Forest Management.*

GEO. B. SUDWORTH, *Assistant Forester in Charge of Dendrology.*

WILLIAM L. HALL, *Assistant Forester in Charge of Forest Products.*

E. A. STERLING, *Assistant Forester in Charge of Forest Extension.*

JAMES B. ADAMS, *Special Fiscal Agent.*

G. G. ANDERSON, *in Charge of Records.*

HERBERT A. SMITH, *in Charge of Section of Publication and Education.*

G. W. WOODRUFF, *in Charge of Section of Law.*

A. F. POTTER, *in Charge of Section of Grazing.*

RAPHAEL ZON, *in Charge of Section of Silvics.*

COERT DU BOIS, *Forest Inspector in Charge of Reserve Organization.*

SMITH RILEY, *Forest Inspector, detailed as District Forester, Southern District.*

F. A. SILCOX, *Forest Assistant, detailed as District Forester, Northern District.*

W. B. GREELEY, *Forest Inspector, detailed as District Forester, Western District.*



## FIELD WORK.

## INSPECTION.

*Office of the Forester:*

F. E. OLMSTED, *Assistant Forester in Charge of General Inspection*, Denver, Colo.

E. T. ALLEN, *Forest Inspector*, Sacramento, Cal.

R. H. CHARLTON, *Forest Inspector*, Washington, D. C.

R. E. BENEDICT, *Forest Inspector*, Provo, Utah.

JOHN H. HATTON, *Forest Inspector*, Yreka, Cal.

ELERS KOCH, *Forest Inspector*, Bozeman, Mont.

W. T. COX, *Assistant Forest Inspector*, Sacramento, Cal.

W. W. CLARK, *Assistant Forest Inspector*, Castleton, Utah.

F. W. REED, *Assistant Forest Inspector*, Pocatello, Idaho.

W. C. HODGE, JR., *Assistant Forest Inspector*, Washington, D. C.

*Forest Management:*

A. K. CHITTENDEN, *Forest Inspector in Charge of Technical Inspection*, Missoula, Mont.

E. E. CARTER, *Forest Inspector*, Denver, Colo.

A. W. COOPER, *Forest Inspector*.

P. G. REDINGTON, *Forest Inspector*, Cody, Wyo.

K. W. WOODWARD, *Assistant Forest Inspector*, Santa Fe, N. Mex.

J. S. HOLMES, *Assistant Forest Inspector*, Paradise, Ariz.

G. M. HOMANS, *Assistant Forest Inspector*, Portland, Oreg.

C. A. LYFORD, *Assistant Forest Inspector*, Cheshire House, Keene, N. H.

A. B. PATTERSON, *Assistant Forest Inspector*, Charleston, S. C.

E. S. BRUCE, *Expert Lumberman, in Charge of Inspection of Logging*, Cass Lake, Minn.

W. E. LA FOUNTAIN, *Assistant Forest Inspector*, Lander, Wyo.

E. M. HAMILTON, *Expert*, Deadwood, S. Dak.

*Forest Products:*

HENRY GRINNELL, *Assistant Forest Inspector*.

M. CLINE, *Engineer of Timber Tests*, New Haven, Conn.

C. G. CRAWFORD, *Assistant Forest Inspector*, New Ludington Hotel, Escanaba, Mich.

*Forest Extension:*

G. B. LULL, *Assistant Forest Inspector*, Hotel Lillie, Los Angeles, Cal.

## ARIZONA.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing reserves—W. H. B. KENT, Flagstaff, Ariz.; assistant, H. O. STABLER, Hotel Sheldon, El Paso, Tex.

## CALIFORNIA.

(M) Examination of proposed cuttings, Sierra Forest Reserve—M. B. PRATT, Southern Hotel, Bakersfield, Cal.; assistants, I. F. ELDREDGE, B. C. GOLDSMITH, H. C. CALKINS, and J. M. CHANDLER.

(M) Examination of proposed cuttings, Klamath and Trinity forest reserves—W. G. DURBIN, Yreka, Cal.

(M) Examination of proposed cuttings, Shasta Forest Reserve—P. T. HARRIS, Sisson, Cal.

(M) Examination of proposed cuttings, Plumas Forest Reserve—H. L. TUCKER, Quincy, Cal.

(M) Estimate Calaveras grove of big trees—F. G. PLUMMER, 1517 Willow street, Alameda, Cal.

(D) Study of tanbark oaks of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley, Cal.

(D) Special studies of California trees, four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY; permanent address, Stanford University, Cal.

(E) Study of planted timber and of State forest lands, in cooperation with the State—S. J. FLINTHAM, Sacramento, Cal.

(E) Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, B. R. H. D'ALLEMAND, Santa Barbara, Cal.

(E) Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena, Cal.; assistant, S. Y. PARNAY.

(P) Tests of the strength of eucalyptus wood, in cooperation with University of California—L. E. HUNT, Berkeley, Cal.

(P) Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in southern California—W. R. WHEATON, Hotel Lillie, Los Angeles, Cal.; assistant, O. T. SWAN.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Flagstaff, Ariz.; assistant, R. W. AYERS, Hotel Hollenbeck, Los Angeles, Cal.

#### COLORADO.

(E) Nursery and planting work, Pikes Peak Forest Reserve—F. W. BESLEY, Colorado City, Colo.

#### CONNECTICUT.

(P) Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven, Conn.; assistant, CORNELIUS BARRY.

(E) Preparation of planting plan for Bridgeport Hydraulic Company, and miscellaneous planting plans in New England—J. F. BOND, Bridgeport, Conn.

(P) Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven, Conn.

#### FLORIDA.

(D) Improved methods of turpentineing, experimental pine forests, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs, Fla.

#### HAWAII.

(F) Examination of lands for new forest reserves, additions and eliminations

(E) Examination of lands for insular forest reserves—R. S. HOSMER, Honolulu, H. T.

#### INDIANA.

(P) Timber testing at Lafayette, Ind., in cooperation with Purdue University—Dr. W. K. HATT, Lafayette, Ind.; assistants, H. D. HARTLEY, O. P. M. Goss, H. S. BETTS, and J. A. NEWLIN.

(P) Study of woods used in the vehicle industry—H. B. HOLROYD, Lafayette, Ind.

#### IOWA.

(E) Preparation of a report on planted timber in Iowa—H. P. BAKER, Ames, Iowa.



## MARYLAND.

(P) Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton, Md.

(D) Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

## MASSACHUSETTS.

(M) Woodlot and timber-tract examinations, in cooperation with the State—ALFRED AKERMAN, State Forester, Boston, Mass.

(P) Experiments to determine the value of various woods for pulp—A. D. LITTLE, 93 Broad street, and H. S. BRISTOL, 74 Pinckney street, Boston, Mass.

## MICHIGAN.

(P) Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and Wisconsin Central railroad companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba, Mich.; assistants, C. S. SMITH and C. E. FEAGIN.

## MINNESOTA.

(P) Experiments in the treating and laying of wooden paving blocks in cooperation with the city of Minneapolis—C. L. HILL, Minneapolis, Minn.

## MISSISSIPPI.

(E) Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College, Miss.

## MONTANA.

(M) Examination of proposed cuttings, Bitter Root Forest Reserve—E. H. CLAPP, care E. A. SHERMAN, Missoula, Mont.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing reserves—R. V. R. REYNOLDS, Kalispel, Mont.

## NEBRASKA.

(E) Study of the tree-planting possibilities in North Platte irrigation project—F. G. MILLER, Mitchell, Nebr.

(E) Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey, Nebr.; assistants, W. H. MAST and LA MORE BESLEY.

## NEVADA.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Flagstaff, Ariz.; assistants, R. B. WILSON, Winnemucca, Nev.; CLYDE LEAVETT, Austin, Nev.; L. VON WERNSTED, Ely, Nev.; S. G. SMITH, Eureka, Nev.

(E) Study of the tree-planting possibilities in the Truckee-Carson irrigation project—E. O. SIECKE, Hazen, Nev.

## NEW HAMPSHIRE.

(F) Location of permanent sample plots—GEORGE HEWITT MYERS and W. D. STERRETT, Waterville, N. H.; assistants, R. WEITKNECHT and W. D. CLARK.

(M) Study of woodlot and forest conditions in southern New Hampshire, in cooperation with the State—L. MARGOLIN, Cheshire House, Keene, N. H.; assistants, A. T. BOISEN, B. MACKAYE, and J. A. FITZWATER.

## NEW MEXICO.

(E) Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard, N. Mex.; assistant, W. B. HADLEY.

(P) Study of uses of dead timber, Pecos River and Jemez forest reserves—E. R. HODSON and J. D. WARNER, Santa Fe, N. Mex.

(F) Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Flagstaff, Ariz.

## NORTH CAROLINA.

(D) Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON; permanent address, Chapel Hill, N. C.

## OREGON.

(P) Tests of the strength of red fir, in cooperation with University of Oregon—J. B. KNAPP, Eugene, Oreg.

## PENNSYLVANIA.

(E) Preliminary study, in cooperation with the Pennsylvania Railroad Company, to determine a forest policy for the company—R. C. BRYANT, Washington, D. C.

(P) Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, JR., care Philadelphia and Reading Coal and Iron Company, Pottsville, Pa.

(E) Preparation of planting plan for the Lehigh Coal and Navigation Company—A. S. PECK, Tobyhanna, Pa.

## SOUTH DAKOTA.

(M) Examination of proposed cutting of insect-killed timber, Black Hills Forest Reserve—H. C. NEEL, Deadwood, S. Dak.

## TEXAS.

(D) Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin, Tex.

## UTAH.

(E) Nursery work on the Salt Lake Forest Reserve—J. M. FETHEROLF, Silver Lake, Utah; assistant, EDWARD C. CLIFFORD.

## VIRGINIA.

(P) Experiments in grading and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, Norfolk, Va.



## WASHINGTON.

(P) Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle, Wash.

(P) Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma, Wash.

## WYOMING.

(M) Examination of proposed timber sales, Yellowstone Forest Reserve—I. T. WORTHLEY, Wapiti, Wyo.

## REGIONAL STUDIES.

## EASTERN STATES.

(M) Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

## MIDDLE WESTERN STATES.

(M) Examination of woodlots and timber tracts, in cooperation with landowners—S. J. RECORD, Crawfordsville, Ind.; assistant, C. E. DUNSTON.

## GENERAL STUDIES.

(E) Study of planting on forest reserves—L. C. MILLER, Washington, D. C.

(E) Cooperative work with railroads and individual landowners in the Middle West—S. N. SPRING, 2838 North Hermitage avenue, Chicago, Ill.

(P) Collection of statistics of forest products for year 1905—H. M. HALE, Washington, D. C.; GEO. K. SMITH, Equitable Building, St. Louis, Mo.

(P) Study of woods used in the slack-cooperage industry—J. J. LEVISON, Washington, D. C.

(P) Study of woods used for box-making—J. P. WENTLING, Washington, D. C.

(P) Study of methods of kiln drying—FREDERICK DUNLAP, Washington, D. C.

(P) Study of waste in lumber manufacture—ALFRED GASKILL, Washington, D. C.

## FOREST RESERVES.

## ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

## ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. McGLONE, Forest Supervisor, Paradise, Ariz.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest

Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott, Ariz.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Roosevelt, Ariz.

#### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka, Cal.

Tahoe Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.; JNO. C. WELLS, Forest Ranger, Nevada City, Cal.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Módoc Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; J. REBMANN, Forest Assistant, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve—G. A. COLEMAN, Forest Supervisor, Sisson, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTON, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Supervisor, Sonora, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaver-ville, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Supervisor, Altúras, Cal.

Yuba Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.

#### COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Colbran, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.



Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison, Colo.; T. D. WOODBURY, Forest Assistant, Mesa, Colo.

Holy Cross Forest Reserve—SHEP. N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.; M. SMITH, Forest Assistant, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango, Colo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—FRANK R. SHERWIN, Forest Ranger in Charge, Denver, Colo.; G. E. CLEMENT, Forest Assistant, Denver, Colo.; F. D. WHITNEY, Forest Ranger, Denver, Colo.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe, Colo.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Monte Vista, Colo.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Delta, Colo.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Priest River, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Weiser Forest Reserve—JOHN B. LAFFERTY, Forest Supervisor, Boise, Idaho.

#### KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

#### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. MCKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMPKINS and H. A. BLILER, Forest Agents, Cass Lake, Minn.

#### MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Gallatin Forest Reserve—DAVID CONKLING, Forest Supervisor, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Ovando, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Tony, Mont.

#### NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

North Platt Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

#### NEW MEXICO.

Gila Forest Reserve—R. C. MCCLURE, Forest Supervisor, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Jemez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.

Lincoln Forest Reserve—JOHN KERR, Forest Supervisor, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.

#### OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.

#### OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. COHOON, Forest Assistant, Marmont, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Walla, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.



Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.; HENRY IRELAND, Deputy Ranger, Prineville, Oreg.

Blue Mountains Forest Reserve (Eastern Division)—D. B. SELLER, Forest Superintendent in Charge, Sumpter, Oreg.; S. S. TERELL, Forest Supervisor, Baker City, Oreg.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver, Utah.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Freemont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

Logan Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Ranger in Charge, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah; J. H. RAMSKILL, Forest Assistant, Parowan, Utah.

Uinta Forest Reserve—R. E. BENEDICT, Forest Inspector in Charge, Provo, Utah.

La Sal Forest Reserve—W. W. CLARK, Assistant Forest Inspector in Charge, Castleton, Utah.

#### WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspoint, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

#### WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Big Horn, Wyo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga,

Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Wapiti, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY W. THURSTON, Forest Ranger, Marquette, Wyo.

## SERVICE CHANGES IN MAY.

### APPOINTED.

T. A. SCOTT, Clerk, at \$1,400 per annum; by transfer from the Bureau of Animal Industry.

M. N. ANDERSON, Clerk, at \$1,000 per annum.

The following persons were appointed Assistant Forest Rangers at \$900 per annum, upon certification by the Civil Service Commission:

ROBERT J. SELKIRK, Santa Rita Forest Reserve, Arizona.

BIRTSALL W. JONES, Santa Catalina Forest Reserve, Arizona.

CHARLES G. POOLE, EDGAR E. MORTIMER, and FRANK O. SPARHAWK, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

HUGH C. McELROY, Lewis and Clark Forest Reserve (South), Montana.

LEE A. HARRIS and CALVIN FARRAR, Washington Forest Reserve (West), Washington.

EDWARD G. STAHL, Lewis and Clark Forest Reserve (North), Montana.

T. ROY HARVEY, C. V. ODEN, and ROBERT L. TAYLOR, Cascade Forest Reserve (South), Oregon.

JOHN W. COLLINS and PAUL F. BEAN, Madison Forest Reserve, Montana.

BARNARD E. MATTSSON, Manti Forest Reserve, Utah.

AUSTIN DODGE, Holy Cross Forest Reserve, Colorado.

LUCIEN W. THORPE, Big Belt Forest Reserve, Montana.

HAROLD J. SAUNDERS and HOMER ROSS, Mount Rainier Forest Reserve, Washington.

WILLIAM SWAN, Bitter Root Forest Reserve, Montana.

A. HARVEY JAMIESON, Bitter Root Forest Reserve, Idaho.

THOMAS F. MAYERS, FRANK SERVOS, and ALVA J. VINTON, Little Belt Forest Reserve, Montana.

LESLIE ALEXANDER and WALTER F. BOWERS, Cochetopa Forest Reserve, Colorado.

WALTER J. DERRICK, JAMES W. SMILEY, and LORENZO D. WILLIAMSON, Helena Forest Reserve, Montana.

CHARLES L. SMITH, Henrys Lake Forest Reserve, Idaho.

ABEL Z. HURTT and CARL W. GLEASON, Big Horn Forest Reserve, Wyoming.

JOHN J. CLIFFORD, Helena Forest Reserve, Montana.

The following persons were appointed Forest Guards, at \$720 per annum:

JESS JONES and JAMES M. McCAMPBELL, Trinity Forest Reserve, California.

J. C. MONTEITH, J. L. WOODEN, M. E. KRIGBAUM, W. T. CARR, WALTER T. CAMPBELL, GRAFTON E. JOHNSON, and FRED RUTLEDGE, Weiser Forest Reserve, Idaho.

GEORGE S. PURTYMAN, WILLIAM H. THROWER, JOEL J. WESTFALL, CHARLES H. HALL, JOHN DOZE, and RAY MURRAY, Sierra Forest Reserve (North), California.

H. P. HURD, J. H. RATLIFF, L. P. MILLER, Park Range Forest Reserve, Colorado.



FRANCIS S. McCLURE, Pikes Peak Forest Reserve, Colorado.

F. W. THOMAS and J. CARL ALBRED, Uinta Forest Reserve, Utah.

ALVA L. KELLER, Wallowa Forest Reserve, Washington.

ORSON W. PRATT, REES B. GRIFFITH, LOUIS CUTLER, DANIEL K. JUDD, and FRANK S. BROWN, Grand Canyon Forest Reserve (North), Arizona.

AARON SNYDER, HARRY G. DUNLAP, and WALTER L. GRIBBLE, Cascade Forest Reserve (North), Oregon.

THOMAS O. MAY, Battlement Mesa Forest Reserve, Colorado.

GUSTAF HOLT, RANDOLPH MESERVEY, JOHN P. LEWIS, HORACE W. CRANDALL, RICHARD GOLDEN, FORREST L. BALL, JOSEPH P. JOHNSON, MARIAN F. MOYA, RAYMOND A. WEBSTER, ALBERT E. BROWN, JOHN E. ALVERSON, ROY E. HOSTETTER, LEWIS J. DEMPSEY, and MAURICE L. PEASE, San Bernardino Forest Reserve, California.

RALPH C. COOK, San Gabriel Forest Reserve, California.

ARTHUR BARRETT, Plumas Forest Reserve, California.

A. B. FOSTER, Lassen Peak Forest Reserve, California.

W. B. RIDER and WILLIAM H. HOTTELLING, Klamath Forest Reserve, California.

FRANK HELFRICH, HARRY H. CHIVINGTON, and HOWARD H. GRIFFITHS, Shasta Forest Reserve (Trinity Division), California.

ADELBERT E. PATTAN and W. T. STARK, Diamond Mountain Forest Reserve, California.

C. K. HJORT, O. O. PRICE, WAYNE BRADLEY, FRANK RINEARSON, J. F. HILT, GEORGE F. NELSON, O. E. BLAIR, H. A. BERGH, S. T. EZELL, H. G. RICHARDS, C. T. GRAY, and M. A. WICKERSHAM, Sawtooth Forest Reserve, Idaho.

MARK M. ROBERTSON and BENJAMIN F. WILTER, Trabuco Canyon Forest Reserve, California.

JAMES B. STEPHENSON, JOSEPH G. SCHERMAN, and JOHN D. MAXFIELD, San Jacinto Forest Reserve, California.

GEORGE F. MILLS and OTTO ROBINETT, Bitter Root Forest Reserve, Idaho.

OTTO HOEGER and THOMAS T. DINSMORE, Santa Barbara Forest Reserve, California.

JAMES F. POORE, Modoc Forest Reserve, California.

HAROLD U. JEWETT, E. W. KELLEY, FRANK McCARN, GEORGE W. DOWNEY, and W. A. MERRILL, Yuba Forest Reserve, California.

WILLIAM C. SMITH, NORMANDUS C. FAULKNER, THOMAS R. PINKERTON, HARRY N. COLTER, JAMES J. STOKES, and HARTLEY C. SHEPARD, Washington Forest Reserve (East), Washington.

GEORGE SIEBENTRITT and CLARENCE L. GEORGE, Gallatin Forest Reserve, Montana.

WILLIAM S. CYPHERS and HERB HILTON, Holy Cross Forest Reserve, Colorado.

D. L. VAN METER, THEODORE SHOEMAKER, Black Hills Forest Reserve, South Dakota.

HARRY WAUGH, MARVIN ELLIS, ARTHUR MCCARTHY, DANIEL R. CARLON, and WILLIAM GARSES, Stanislaus Forest Reserve, California.

WILLIAM HICKLIN, REUBEN L. NEILL, and WILLIAM A. CAMPBELL, San Francisco Mountains Forest Reserve, Arizona.

HARRY HAWKINS, W. F. SAUER, and E. E. JONES, Tahoe Forest Reserve, California.

JAMES D. MCCALL, GUY JELLISON, ENOS SMITH, ED LINGO, WILLIAM D. WOLLEY, and H. M. LUCHT, Payette Forest Reserve, Idaho.

MANUEL RUIZ and T. B. SMITH, Black Mesa Forest Reserve, Arizona.

CHARLES O. WILLIS and NORMAN MAPES, Shasta Forest Reserve (McCloud Division), California.

ZELL SCHOGARD, WALLACE RIDDLE, BEECHAM GEORGE, FOSTER CHARLES, CHARLEY BULLETS, and BENJAMIN AVERY, Sevier Forest Reserve, Utah.

R. J. BROWN, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

GEORGE D. CROCKETT, Cassia Forest Reserve, Idaho.

E. G. ESTES, Chiricahua Forest Reserve, Arizona.

V. H. LINDSEY and W. O. GOBLE, Mount Rainier Forest Reserve, Washington.

F. M. JACK, CYRUS NIBLEY, E. W. HUNNICUT, and CLAUDE S. CUSICK, Henrys Lake Forest Reserve, Idaho.

S. L. McLAURIN, Shipping Clerk, at \$600 per annum.

ALBERT MORRIS, Shipping Clerk, at \$600 per annum.

Miss A. L. DAVIES, Clerk, at \$600 per annum.

Miss S. L. ACKER, Draftsman, at \$600 per annum.

Miss E. F. GORDON, Clerk, at \$600 per annum.

Miss GRACE FRANCIS, Clerk, at \$480 per annum.

J. M. LOCKNANE, Messenger Boy, at \$360 per annum.

#### PROMOTED.

S. L. N. ELLIS, Stanislaus Forest Reserve, California, from Ranger in Charge at \$900 per annum to Forest Supervisor at \$1,500 per annum.

A. H. HOGUE, Modoc and Warner Mountains forest reserves, California, from Forest Supervisor at \$1,200 per annum to Forest Supervisor at \$1,500 per annum.

FRED HANSON, Olympic Forest Reserve, Washington, from Forest Supervisor at \$1,080 to Forest Supervisor at \$1,400 per annum.

DAN S. PACK, Payson Forest Reserve, Utah, from Forest Supervisor at \$1,000 per annum to Forest Supervisor at \$1,400 per annum.

J. B. LAFFERTY, Weiser Forest Reserve, Idaho, from Deputy Forest Ranger at \$1,000 per annum to Ranger in Charge of the Weiser Reserve at \$1,400 per annum.

JOHN KERR, Lincoln Forest Reserve, New Mexico, from Ranger in Charge at \$1,000 to Forest Supervisor at \$1,400 per annum.

ALBERT REYNOLDS, Big Belt Forest Reserve, Montana, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,100 per annum.

FRANK R. SHERWIN, Pikes Peak Forest Reserve, Colorado, from Ranger in Charge at \$900 per annum to Ranger in Charge at \$1,100 per annum.

RICHARD P. BEAN, Lewis and Clark Forest Reserve (South), Montana, from Deputy Forest Ranger at \$900 to Deputy Forest Ranger at \$1,100 per annum.

CHRIST MORGENROTH, Olympic Forest Reserve, Washington, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,100 per annum.

WILLARD I. PACK, Uinta Forest Reserve, Utah, from Deputy Forest Ranger at \$1,000 per annum to Deputy Forest Ranger at \$1,100 per annum.

ABRAHAM L. HOY, Lewis and Clark Forest Reserve (South), Montana, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,100 per annum.

JAMES A. BLAIR, Holy Cross Forest Reserve, Colorado, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.

WILLIAM WALTER, Holy Cross Forest Reserve, Colorado, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.

HARVEY FRENCH, Holy Cross Forest Reserve, Colorado, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

EUGENE F. TULLY, Sierra Forest Reserve (North), California, from Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.



FRANK M. THORNTON, San Jacinto Forest Reserve, California, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

FRANK C. LILLIE, Trabuco Canyon Forest Reserve, California, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

EDWARD G. NEWMAN, Olympic Forest Reserve, Washington, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

C. M. WYNANT, Gila River Forest Reserve, New Mexico, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

FRED HERRIG, Lewis and Clark Forest Reserve (North), Montana, from Assistant Forest Ranger at \$900 to Deputy Forest Ranger at \$1,000 per annum.

J. H. KINNEY, Lincoln Forest Reserve, New Mexico, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

GEORGE A. PETER, Lincoln Forest Reserve, New Mexico, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

WILLIAM F. BINGHAM, Lincoln Forest Reserve, New Mexico, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

WILLIAM B. KELSO, Pikes Peak Forest Reserve, Colorado, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum.

WILLIAM W. BORAM, Battlement Mesa Forest Reserve, Colorado, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum.

JOHN W. LOWELL, Jr., Battlement Mesa Forest Reserve, Colorado, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum.

MISS JENNIE TAYLOR, Clerk, from \$480 to \$600 per annum; promotion made for efficiency and to fill vacancy on statutory roll.

#### TRANSFERRED.

EDSON T. BUKER, Assistant Forest Ranger, from Bitter Root Forest Reserve to Hell Gate Forest Reserve, Montana.

JAMES D. VANCE, Assistant Forest Ranger, from Bitter Root Forest Reserve to Hell Gate Forest Reserve, Montana.

CHARLES C. WRIGHT, Assistant Forest Ranger, from Bitter Root Forest Reserve to Hell Gate Forest Reserve, Montana.

THOMAS W. LAIRD, Assistant Forest Ranger, from Bitter Root Forest Reserve to Hell Gate Forest Reserve, Montana.

ALBERT H. HOFFMAN, Assistant Forest Ranger, from Cochetopa Forest Reserve to San Isabel Forest Reserve, Colorado.

ORRIN C. SNOW, Assistant Forest Ranger, from Aquarius Forest Reserve to La Sal Forest Reserve, Utah.

ELMORE W. SEARCY, Deputy Forest Ranger, from Little Belt Forest Reserve to Helena Forest Reserve, Montana.

#### RESTORED FROM FURLOUGH.

H. P. BAKER, Forest Assistant.

F. G. MILLER, Forest Assistant.

G. L. CLOTHIER, Assistant Forest Inspector.

JAMES D. VANCE, CHARLES C. WRIGHT, THOMAS W. LAIRD, and EDSON T. BUKER, Assistant Forest Rangers, Bitter Root Forest Reserve, Montana.

JAMES STOUT, Assistant Forest Ranger, Tahoe Forest Reserve, California.

JAMES G. CAYTON, Assistant Forest Ranger, Battlement Mesa Forest Reserve, Colorado.

HENRY SEDGE, Forest Ranger, and ELIAS J. WIGALL, Assistant Forest Ranger, Mount Rainier Forest Reserve, Washington.

SAMUEL S. SWENNING, ROBERT J. WATSON, SILAS L. MCKEE, and SIM E. BROWDER, Assistant Forest Rangers, Cascade Forest Reserve (South), Oregon.

WILLIAM E. SIMONS, Assistant Forest Ranger, and FRED J. BIRD, Forest Guard, Cascade Forest Reserve (North), Oregon.

WILLARD K. THOMPSON, Assistant Forest Ranger, San Jacinto Forest Reserve, California.

WALTER K. ROBINSON, Assistant Forest Ranger, Trabuco Canyon Forest Reserve, California.

ORRIN C. SNOW and RUFUS H. LISTON, Assistant Forest Rangers, Aquarius Forest Reserve, Utah.

THOMAS THOMPSON, Assistant Forest Ranger, Washington Forest Reserve (West), Washington.

LEWIS PURDY, Forest Ranger, Lewis and Clark Forest Reserve (North), Montana.

LESTER C. WALKER, Forest Guard, Tahoe Forest Reserve, California.

JOHN B. PESTONI, Forest Guard, Stanislaus Forest Reserve, California.

ROBERT E. CLARK, Forest Guard, Santa Barbara Forest Reserve, California.

#### RESIGNED FROM THE SERVICE.

A. T. SEARLE, Forest Assistant, Pasadena, Cal.

JAMES W. STEPHENS, Assistant Forest Ranger, San Francisco Mountains Forest Reserve, Arizona.

E. C. OWEN, Forest Guard, Bull Run Forest Reserve, Oregon.

GEORGE V. RING, Deputy Forest Ranger, Bitter Root Forest Reserve, Idaho.

JOHN M. ELLIS, Forest Guard, Park Range Forest Reserve, Colorado.

EUGENE McDANIEL, Assistant Forest Ranger, San Francisco Mountains Forest Reserve, Arizona.

WILLIAM H. MENDENHALL, Forest Guard, Pikes Peak Forest Reserve, Colorado.

A. E. FRANKLIN, Forest Supervisor, Gallatin Forest Reserve, Montana.

JOHN F. WOODARD, Forest Guard, Cascade Forest Reserve (South), Oregon.

J. C. CORBUS, Forest Guard, Cascade Forest Reserve (South), Oregon.

HARVEY V. COLE, Assistant Forest Ranger, Madison Forest Reserve, Montana.

ROGER S. BALDWIN, Assistant Forest Ranger, Santa Barbara Forest Reserve, California.

JAMES E. CULLOM, Assistant Forest Ranger, Gila River Forest Reserve, New Mexico.

WALTER G. MUSICK, Forest Guard, Gila River Forest Reserve, New Mexico.

ROBERT S. ATMORE, Forest Guard, Park Range Forest, Colorado.

MISS LILA W. COLLINS, Clerk.

A. J. CLEARY, Agent in Timber Testing, Berkeley, Cal.

#### SUSPENDED.

A. A. CLAYSON, Forest Ranger, Leadville Forest Reserve, Colorado.

A. J. TEMPLETON, Assistant Forest Ranger, Pikes Peak Forest Reserve, Colorado.

L. A. WARD, Assistant Forest Ranger, Pikes Peak, Forest Reserve, Colorado.

#### FURLOUGHED.

T. F. RIXON, Forest Expert, South Bend, Wash.





# United States Department of Agriculture,

## FOREST SERVICE.

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAMME FOR JULY, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are not yet fixed and reference to projects for which plans have not been matured are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known he should be addressed in care of the Forest Service, Washington, D. C.

#### OFFICE OF THE FORESTER.

GIFFORD PINCHOT, Forester.

OVERTON W. PRICE, Associate Forester.

Law, GEO. W. WOODRUFF, in Charge.

General Inspection.	{	FREDERICK E. OLMSTED, <i>in Charge</i> , Salt Lake City, Utah.
		E. T. ALLEN, <i>Forest Inspector</i> , Sacramento, Cal.
		R. H. CHARLTON, <i>Forest Inspector</i> , Washington, D. C.
		R. E. BENEDICT, <i>Forest Inspector</i> , Provo, Utah.
		JOHN H. HATTON, <i>Forest Inspector</i> , Los Angeles, Cal.
		ELERS KOCH, <i>Forest Inspector</i> , Big Horn, Wyo.
		W. T. COX, <i>Assistant Forest Inspector</i> , Durango, Colo.
		W. W. CLARK, <i>Assistant Forest Inspector</i> , Grantsville, Utah.
F. W. REED, <i>Assistant Forest Inspector</i> , St. Anthony, Idaho.		
W. C. HODGE, Jr., <i>Assistant Forest Inspector</i> , Washington, D. C.		

#### PROJECTS.

*New Hampshire.*—Location of permanent sample plots—GEORGE HEWITT MYERS and W. D. STERRETT, Waterville; assistants, R. WEITKNECHT and W. D. CLARK.



## FOREST MANAGEMENT.

THOMAS H. SHERRARD, Assistant Forester, in Charge.

**Timber Sales,** A. K. CHITTENDEN, *Assistant Chief, in Charge.*

<b>Silvicultural Inspection,</b>	{	E. E. CARTER, <i>Forest Inspector, in Charge</i> , Klamath Falls, Oreg.
		C. S. CHAPMAN, <i>Forest Inspector</i> , Boise, Idaho.
		K. W. WOODWARD, <i>Assistant Forest Inspector</i> , Santa Fe, N. Mex.
		J. S. HOLMES, <i>Assistant Forest Inspector</i> , Tucson, Ariz.
		G. M. HOMANS, <i>Assistant Forest Inspector</i> , Portland, Oreg.
		C. A. LYFORD, <i>Assistant Forest Inspector</i> , Washington, D. C.
		A. B. PATTERSON, <i>Assistant Forest Inspector</i> , Washington, D. C.
		E. S. BRUCE, <i>Expert Lumberman, in Charge</i> , Butte, Mont.
<b>Logging Inspection,</b>	{	W. E. LA FOUNTAIN, <i>Assistant Forest Inspector</i> , Dubois, Wyo.
		E. M. HAMILTON, <i>Expert</i> , Deadwood, S. Dak.
		T. J. GARVIN, <i>Expert</i> , Cody, Wyo.

**Cooperation,** A. W. COOPER, *Forest Inspector, in Charge.*

### PROJECTS.

#### TIMBER SALES.

*Arizona.*—Examination of proposed timber sales, Santa Catalina Forest Reserve—F. E. AMES, Tucson.

*California.*—Examination of proposed timber sales, Yuba Forest Reserve—M. B. PRATT, Nevada City.

Examination of proposed timber sales, Plumas and Diamond Mountain Forest Reserve—W. G. DURBIN, Beckwith.

Examination of proposed timber sales, Shasta Forest Reserve—P. T. HARRIS, La Moine; assistants, E. H. RICHARDSON and A. G. SOARES.

Examination of proposed timber sales, Sierra Forest Reserve—I. F. ELDRIDGE, Badger, Tulare County; assistants, H. G. CALKINS, B. G. GOLDSMITH, and J. M. CHANDLER.

Estimate Calaveras grove of big trees—F. G. PLUMMER, Big Trees, Calaveras County; assistants, R. W. WALKER, R. A. HALLORAN, and S. S. SMITH.

*Idaho.*—Examination of proposed timber sales, Sawtooth and Payette reserves—S. MOORE, Boise.

Working plan for Henrys Lake Forest Reserve—J. G. PETERS, forest assistant, St. Anthony; A. T. BOISEN and C. A. GALARNEAU.

*Montana.*—Examination of proposed timber sales, Gallatin Forest Reserve—E. H. CLAPP, Bozeman.

Examination of proposed timber sales, Hell Gate Forest Reserve—W. G. WEIGLE and R. Y. STUART, Missoula.

Examination of proposed timber sales, Absaroka division of the Yellowstone Forest Reserve—J. E. KEACH, Livingston.

*New Mexico.*—Examination of proposed timber sales, Jemez Forest Reserve—A. B. RECKNAGEL, Santa Fe.

*South Dakota.*—Examination of proposed cutting of insect-killed timber, Black Hills Forest Reserve—H. C. NEEL, Deadwood.

*Utah.*—Examination of proposed timber sales, Uinta Forest Reserve—L. L. WHITE, Provo.

*Wyoming.*—Examination of proposed timber sales, Yellowstone Forest Reserve—I. T. WORTHLEY, Wapiti.

#### COOPERATIVE.

*Massachusetts.*—Woodlot and timber-tract examinations, in cooperation with the State—ALFRED AKERMAN, State forester, Boston.

*New Hampshire.*—Study of wood-lot and forest conditions in southern New Hampshire, in cooperation with the State—B. MACKAYE, Cheshire House, Keene.

Working plan for Pennichuck Water Company, Nashua—B. MACKAYE, Cheshire House, Keene; assistants, E. S. WOODRUFF and L. S. MURPHY.

*Wisconsin.*—Working plans for timber sales on Indian reservations—E. M. GRIFFITH, State forester, Madison; assistant, J. A. HOWARTH.

*Eastern States.*—Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

*Middle Western States.*—Examination of woodlots and timber tracts, in cooperation with landowners—S. J. RECORD, Crawfordsville, Ind.

## DENDROLOGY.

GEO. B. SUDWORTH, Assistant Forester, in Charge.

### PROJECTS.

*California.*—Study of tanbark trees of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley.

Special studies of little-known California trees—four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY, Leland Stanford University.

*Florida.*—Study of improved methods of turpentine, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs.

*Maryland.*—Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

*North Carolina.*—Study of characteristics of turpentine derived from American pines, in cooperation with the department of chemistry, University of North Carolina—GEORGE A. JOHNSTON (directed by Dr. CHAS. H. HERTY, Professor of Chemistry), Chapel Hill.

*Texas.*—Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin.

## FOREST EXTENSION.

ERNEST A. STERLING, Assistant Forester, in Charge.

Inspection, G. B. LULL.

Cooperative Planting, R. C. BRYANT.

Reserve Planting, L. C. MILLER.

### PROJECTS.

*California.*—Study of planted timber in cooperation with the State—S. J. FLINTHAM, Hotel Hollenbeck, Los Angeles.

Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAUVY, Pasadena; assistant, B. R. H. D'ALLEMAND, Santa Barbara.

Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAUVY, Pasadena; assistant, S. Y. PARNAY.

*Colorado.*—Nursery and planting work, Pikes Peak Forest Reserve—S. B. DETWILER, Colorado City; assistant, J. F. KÜMMEL.

*Connecticut.*—Miscellaneous planting plans in New England—J. F. BOND, Bridgeport.

*Hawaii.*—Cooperative experimental planting—R. S. HOSMER, Honolulu.

*Mississippi.*—Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College.

*Nebraska.*—Study for tree planting in the North Platte irrigation project—F. G. MILLER, Mitchell.

Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey; assistants, W. H. MAST, E. B. FROTHINGHAM, and LA MORE BESLEY.



*Nevada.*—Study for tree planting in the Truckee-Carson irrigation project—E. O. SIECKE, Hazen.

*New Mexico.*—Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard; assistant, W. B. HADLEY.

*Pennsylvania.*—Preliminary study, in cooperation with the Pennsylvania Railroad Company, to determine a forest policy for the company—R. C. BRYANT, Washington, D. C.

Preparation of planting plan for the Lehigh Coal and Navigation Company—A. S. PECK, Tobyhanna; assistant, A. E. OMAN.

*Utah.*—Nursery work on the Salt Lake Forest Reserve—J. M. FETHEROLF, Silver Lake; assistant, EDWARD C. CLIFFORD.

*Middle Western States.*—Study for forest planting in Ohio and Indiana—S. N. SPRING, Cleveland, Ohio; assistant, W. H. VON BAYER.

Preparation of report on forest planting in Iowa—H. P. BAKER, Washington, D. C.

*General Studies.*—Preliminary examination of lands of Union Pacific Railroad, in cooperation with the company—C. A. SCOTT, Halsey, Nebr.; assistant, F. J. PHILIPS.

Preparation of report on relation of forest cover to stream flow in California—J. D. GUTHRIE, Washington, D. C.

## FOREST PRODUCTS.

WM. L. HALL, Assistant Forester, in Charge.

Inspection, HENRY GRINNELL.

Forest Measurements, JOHN FOLEY.

Wood Preservation, W. F. SHERFESEE, *Acting*.

Wood Chemistry, A. L. DEAN.

Wood Utilization, R. S. KELLOGG.

Reserve Engineering, —————.

## PROJECTS.

*California.*—Tests of the strength of eucalyptus wood, in cooperation with University of California—L. E. HUNT, Berkeley.

Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in southern California—W. R. WHEATON, Hotel Lillie, Los Angeles; assistant, O. T. SWAN.

*Colorado.*—Study of the uses of dead and mature timber on forest reserves—E. R. HODSON and FREDERICK DUNLAP, Denver.

*Connecticut.*—Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven; assistant, CORNELIUS BARRY.

Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven.

*Indiana.*—Timber testing at Lafayette, in cooperation with Purdue University—Dr. W. K. HATT, Lafayette; assistant, H. S. BETTS, O. P. M. Goss, and J. A. NEWLIN.

Study of woods used in the vehicle industry—H. B. HOLROYD, Lafayette.

*Maryland.*—Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton.

*Massachusetts.*—Experiments to determine the value of various woods for pulp—A. D. LITTLE, 93 Broad street, and H. S. BRISTOL, 74 Pinckney street, Boston.

*Michigan.*—Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and the Wisconsin Central railway companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba; assistant, C. E. FEAGIN.

*Minnesota.*—Experiments in the treating and laying of wooden paving blocks, in cooperation with the city of Minneapolis—C. L. HILL, Minneapolis.

*Oregon.*—Tests of the strength of red fir, in cooperation with University of Oregon—J. B. KNAPP, Eugene.

*Pennsylvania.*—Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, Jr., care Philadelphia and Reading Coal and Iron Company, Pottsville.

*Utah.*—Study of the uses of dead and mature timber on forest reserves—J. D. WARNER, Beaver.

*Washington.*—Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle.

Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 north K street, Tacoma.

*General Studies.*—Collection of statistics of forest products for year 1905—H. M. HALE, Washington, D. C.; GEORGE K. SMITH, Victoria Building, St. Louis, Mo.

Study of lumber prices— ————, Washington, D. C.

Study of commercial processes of wood distillation—W. C. GEER, Washington, D. C.

## PUBLICATION AND EDUCATION.

HERBERT A. SMITH, Editor, in Charge.

Silvics, RAPHAEL ZON.

Review, FINDLEY BURNS.

Information, TREADWELL CLEVELAND, Jr.

Education, HERBERT A. SMITH.

Printing, QUINCY R. CRAFT.

## PUBLICATIONS.

*Bulletin No. 73.*—Grades and Amount of Lumber Sawed from Yellow Poplar, Yellow Birch, Sugar Maple, and Beech, by Edward A. Braniff, Forest Assistant.

*The Use Book.*—Regulations and Instructions for the Use of the National Forest Reserves (revised edition).

## RECORD.

JAMES B. ADAMS, Special Fiscal Agent, in Charge.

Maintenance, GEO. G. ANDERSON.

Accounts, GEO. E. KING.

Purchase, HARRY C. TOWERS.

## GRAZING.

A. F. POTTER, Inspector of Grazing, in Charge.

The attention of forest officers is drawn especially to the following new or modified regulations and instructions in the new edition of *The Use Book*:

Instruction under Regulation 46 in reference to protection of small owners of stock by a renewal of permit without reduction.



Instruction under Regulation 50 regarding denial of privileges to persons allowing stock to drift and graze without permit.

Instruction under Regulation 51 providing that in counting sheep and goats the former percentage basis system is abandoned, and that hereafter no count will be made of lambs or kids under six months old, but that allowance will be made in the charge for old stock.

Regulation 63 (modifying former Regulation 22) providing that a personal certificate of title to land will be accepted when the records of the General Land Office show that title to the land claimed has passed from the United States.

Instruction under Regulation 67 providing additional inclosure privileges for the purpose of pasturing milch or work animals and graded or thoroughbred stock.

Regulation 69 providing for the recognition of live-stock associations through their advisory boards.

### RESERVE ORGANIZATION.

COERT DU BOIS, Forest Inspector, in Charge.

Reserve Districts, { Northern District, F. A. SILCOX.  
Western District, W. B. GREELEY.  
Southern District, SMITH RILEY.

Reserve Boundaries, COERT DU BOIS.

### PROJECTS.

*Arizona*.—Examination of lands for new forest reserves, additions to and eliminations from existing reserves—W. H. B. KENT, Flagstaff, Ariz.; assistant, H. O. STABLER, Hotel Sheldon, El Paso, Tex.

*California*.—Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Flagstaff, Ariz.; assistant, R. W. AYRES, Hotel Hollenbeck, Los Angeles, Cal.

*Hawaii*.—Examination of lands for new forest reserves, additions to and eliminations from existing reserves—R. S. HOSMER, Honolulu.

*Montana*.—Examination of lands for new forest reserves, additions to and eliminations from existing reserves—R. V. R. REYNOLDS, Kalispell.

*Nevada*.—Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, headquarters Flagstaff, Ariz.; assistants, R. B. WILSON, Elko, Nev.; CLYDE LEAVETT, Austin, Nev.; L. VON WERNSTED, Geyser, Nev., and S. G. SMITH, Eureka, Nev.

### EXECUTIVE AND PROTECTIVE FORCE ON RESERVES.

#### ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

#### ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. McGLONE, Forest Supervisor, Paradise, Ariz.  
Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott, Ariz.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; T. S. WOOLSEY, JR., Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Roosevelt, Ariz.

#### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka, Cal.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.; JOSEPH C. LA PLANT, Forest Ranger, Burney, Cal.

Modoc Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—T. P. LUKENS, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; J. REBMANN, Forest Assistant, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve—G. A. COLEMAN, Forest Supervisor, Sisson, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTEN, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Supervisor, Sonora, Cal.

Tahoe Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.; JNO. C. WELLS, Forest Ranger, Nevada City, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaver-ville, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas, Cal.

Yuba Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.



## COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran, Colo.; T. D. WOODBURY, Forest Assistant, Collbran, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison, Colo.; T. D. WOODBURY, Forest Assistant, Collbran, Colo.

Holy Cross Forest Reserve—SHEP. N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.; M. SMITH, Forest Assistant, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango, Colo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—FRANK R. SHERWIN, Forest Ranger in Charge, Denver, Colo.; G. E. CLEMENT, Forest Assistant, Denver, Colo.; F. D. WHITNEY, Forest Ranger, Denver, Colo.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe, Colo.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Monte Vista, Colo.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Delta, Colo.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

## IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Williams, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho.

Weiser Forest Reserve—JOHN B. LAFFERTY, Forest Supervisor, Weiser, Idaho.

## KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

## MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. MCKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMKINS and H. A. BLILER, Forest Agents, Cass Lake, Minn.

## MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Helena Forest Reserve—DWIGHT BUSHNELL, Forest Supervisor, Helena, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.

Gallatin Forest Reserve—DAVID CONKLING, Forest Supervisor, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Kalispell, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Linley, Mont.

## NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

North Platte Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

## NEW MEXICO.

Gila Forest Reserve—R. C. McCLURE, Forest Supervisor, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Jemez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.

Lincoln Forest Reserve—JOHN KERR, Forest Supervisor, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.

## OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.

## OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.; HENRY IRELAND, Deputy Forest Ranger, Prineville, Oreg.

Blue Mountains Forest Reserve (Eastern Division)—D. B. SELLER, Forest Superintendent in Charge, Sumpter, Oreg.; S. S. TERRELL, Forest Supervisor, Sumpter, Oreg.



Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. CAHOON, Forest Assistant, Portland, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver, Utah.

Dixey Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

La Sal Forest Reserve—ORRIN C. SNOW, Forest Ranger in Charge, Castleton, Utah.

Logan Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Ranger in Charge, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah; J. H. RAMSKILL, Forest Assistant, Parowan, Utah.

Uinta Forest Reserve—WILLARD I. PACK, Forest Ranger in Charge, Provo, Utah.

#### WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspport, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

## WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Big Horn, Wyo.  
 Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Wapiti, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY THURSTON, Forest Ranger, Marquette, Wyo.

## SERVICE CHANGES IN JUNE.

## APPOINTMENTS.

## Grazing—

W. C. CLOS, Inspector of Grazing, at \$1,500 per annum.

C. H. ADAMS, Inspector of Grazing, at \$1,200 per annum.

## Reserves—

HENRY H. HOTCHKISS, Forest Expert, Gila River Forest Reserve, New Mexico.

JOHN D. STOUT, Clerk, Big Horn Forest Reserve, Wyoming.

The following persons were appointed Assistant Forest Rangers, at \$900 per annum, upon certification by the Civil Service Commission:

HARRY W. CHAMBERS, Big Belt Forest Reserve, Montana.

PETER G. PETERSON, Yellowstone Forest Reserve (Wind River Division), Wyoming.

THEODORE CHRISTENSEN, Lewis and Clark Forest Reserve (North), Montana.

WAYNE H. SCHERMERHORN, Lewis and Clark Forest Reserve (South), Montana.

LUCAS W. HASTINGS, GLIDDEN J. BARSTOW, and FRED GRAHAM, Yellowstone Forest Reserve (Teton Division), Wyoming.

KEITH A. URQUHART, Pikes Peak Forest Reserve, Colorado.

The following persons were appointed Forest Guards, at \$720 per annum:

O. H. ANDERSON, Klamath Forest Reserve, California.

WALTER T. MORRIS, Maury Mountains Forest Reserve, Oregon.

E. TAYLOR, La Sal Forest Reserve, Utah.

JOHN P. BROCKBANK, Manti Forest Reserve, Utah.

LUTHER W. SUTTON and ABNER O. REYNOLDS, Gila River Forest Reserve, New Mexico.

CHARLES R. EDESON, Henrys Lake Forest Reserve, Idaho.

MARTIN MURRAY and CALVIN H. HUFF, Priest River Forest Reserve, Idaho.

PETER VANDEBURGH, HIRAM R. BENSON, JOHN CHAMBERLAIN, ED MILLS, and OLIVER H. LINCOLN, Bitter Root Forest Reserve, Idaho.

HARRY CRISWELL and JOHN O'CONNOR, Park Range Forest Reserve, Colorado.

JAMES WIGHT and CHARLES CALLAHAN, Stanislaus Forest Reserve, California.

CORNELIUS F. SULLIVAN, HARRY H. CHIVINGTON, and JAMES F. RICHARDSON, Shasta Forest Reserve, California.

HOWARD K. GRIFFITHS, Trinity Forest Reserve, California.

THORNTON KINNEY, San Bernardino Forest Reserve, California.

CHARLES E. JERRETT, Yuba Forest Reserve, California.

C. E. WHITE, North Platte Forest Reserve, Nebraska.

LOUIS W. SHEVELING, Short Pine Forest Reserve, South Dakota.



HENRY W. SMITH, San Francisco Mountains Forest Reserve, Arizona.

W. A. FERGUSON, Mount Graham Forest Reserve, Arizona.

ALBERT E. COLE, Madison Forest Reserve, Montana.

JOHN R. HUGHES, Battlement Mesa Forest Reserve, Colorado.

STEVE H. DREW, Washington Forest Reserve (East), Washington.

JOHN D. JONES, HARRY N. MORGAN, and FOSTER G. SMITH, Hell Gate Forest Reserve, Montana.

RALPH G. VOSS and W. E. WARDEN, Mount Rainier Forest Reserve, Washington.

GUY W. PARKER, W. C. NEFF, MARTIN S. DURBIN, and FRANK LEARHART, Cascade Forest Reserve (South), Oregon.

JOHN W. HUSKEY, WINFIELD S. OLINGER, and PERCY T. SHELLEY, Cascade Forest Reserve (North), Oregon.

WALTER T. MORRIS, Maury Mountains Forest Reserve, Oregon.

GEORGE W. BOOKER, Yellowstone Forest Reserve (Teton), Wyoming.

GEORGE CAVIN, FRANK P. KELTIE, FRANK L. PARTRIDGE, and JAMES W. WELTY, Sierra Forest Reserve (North), California.

ALBERT A. HARDY and IRVING H. SNELL, Uinta Forest Reserve, Utah.

HARRY E. CROSSLY, EUSTACE A. WOODS, BENZ. S. FARNSWORTH, FRANK A. DONEY, WILLIAM MONAHAN, FOREST F. HARBON, JOHN D. JONES, FRANK OPALKA, and FRANK HIGGINS, Lewis and Clark Forest Reserve (South), Montana.

JAMES D. FINE and MONTIE PEARSON, Blue Mountains Forest Reserve (West), Oregon.

GEORGE W. SMITH, THOMAS H. WILLIAMSON, VOLNEY J. DAWSON, THOMAS H. PARKER, HARVEY W. HARRIS, and J. MILTON SULLENS, Blue Mountains Forest Reserve (East), Oregon.

The following Forest Students were appointed Forest Guards on the Minnesota National Forest Reserve, Minnesota, at a salary of \$40 per month:

W. A. MOORE, GEORGE DE CANAVARRO, ERIC PETERSON, and F. I. ROCKWELL.

#### PROMOTED.

The following promotions were made in accordance with the provisions of Forest Reserve Order 18:

ALBERT E. RAE, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Uinta Forest Reserve, Utah.

JOHN A. PACK, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Uinta Forest Reserve, Utah.

GRANT CARPENTER, from Forest Ranger at \$840 per annum to assistant Forest Ranger at \$900 per annum, Uinta Forest Reserve, Utah.

JOSEPH F. GALBRAITH, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Washington Forest Reserve (West), Washington.

B. F. BONDURANT, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Yellowstone Forest Reserve (Teton Division), Wyoming.

ROBERT PREMBLE, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Yellowstone Forest Reserve (Teton Division), Wyoming.

#### REINSTATED.

ALBERT N. D. HOOPER, Assistant Forest Ranger, Leadville Forest Reserve, Colorado.

**SEPARATED.**

ARTHUR M. NEAL, Forest Guard, Wichita Forest Reserve, Oklahoma.

**RESTORED FROM FURLOUGH.**

JOHN H. MULLISON, Deputy Forest Ranger, Medicine Bow Forest Reserve, Wyoming.

JAY C. CLARK, Assistant Forest Ranger, Yellowstone Forest Reserve (Wind River Division), Wyoming.

ROBERT PREMBLE, Assistant Forest Ranger, Yellowstone Forest Reserve (Teton Division), Wyoming.

B. F. BONDURANT, Assistant Forest Ranger, Yellowstone Forest Reserve (Teton Division), Wyoming.

FRANK MAZRAIL, Forest Ranger, Lewis and Clark Forest Reserve (North), Montana.

JOSEPH F. GALBRAITH, Assistant Forest Ranger, Washington Forest Reserve (East), Washington.

**RESIGNED FROM THE SERVICE.**

D. C. POWELL, Assistant Forest Ranger, Cascade Forest Reserve (North), Oregon.

FRED W. STAHLMAN, Forest Guard, Cascade Forest Reserve (North), Oregon.

O. V. HICKMAN, Assistant Forest Ranger, Bull Run Forest Reserve, Oregon.

W. P. BUREIDGE, Assistant Forest Ranger, Uinta Forest Reserve, Utah.

ALVA R. MEEK, Forest Guard, Gila River Forest Reserve, New Mexico.

WILLIAM C. SMITH, Forest Guard, Washington Forest Reserve (East), Washington.

JULIUS HENRICH, Assistant Forest Ranger, Yellowstone Forest Reserve (Wind River Division), Wyoming.

HENRY SEDGE, Assistant Forest Ranger, Mount Rainier Forest Reserve, Washington.

H. G. RICHARDS, Forest Guard, Sawtooth Forest Reserve, Idaho.

ORLANDO O. PRICE, Forest Guard, Sawtooth Forest Reserve, Idaho.

JAMES G. CAYTON, Assistant Forest Ranger, Battlement Mesa Forest Reserve, Colorado.

HENRY E. DINGMAN, Assistant Forest Ranger, Battlement Mesa Forest Reserve, Colorado.

HENRY J. BELL, Assistant Forest Ranger, Sierra Forest Reserve (North), California.

**DISMISSED FROM THE SERVICE.**

LEON A. WARD, Assistant Forest Ranger, Pikes Peak Forest Reserve, Colorado.

CLAUDE M. JOHNSON, Deputy Forest Ranger, Washington Forest Reserve (East), Washington.

A. A. CLAYSON, Assistant Forest Ranger, Leadville Forest Reserve, Colorado.

A. J. TEMPLETON, Deputy Forest Ranger, Pikes Peak Forest Reserve, Colorado.

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With deep regret announcement is made of the death, on June 15, 1906, of Mr. WESLEY JOHNSON GARDNER, Forest Assistant in the Forest Service.

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# United States Department of Agriculture,

## FOREST SERVICE.

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAMME FOR AUGUST, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are not yet fixed and reference to projects for which plans have not been matured are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known he should be addressed in care of the Forest Service, Washington, D. C.

#### OFFICE OF THE FORESTER.

GIFFORD PINCHOT, Forester.

JOSEPH W. PRICE, Associate Forester.

#### LAW.

GEORGE W. WOODRUFF, in Charge.

#### GENERAL INSPECTION.

FREDERICK E. OLMSTED, in Charge, Ketchikan, Alaska.

E. T. ALLEN, *Forest Inspector*, Ashford, Wash.

R. E. BENEDICT, *Forest Inspector*, Provo, Utah.

JOHN H. HATTON, *Forest Inspector*, Los Angeles, Cal.

ELERS KOCH, *Forest Inspector*, Bozeman, Mont.

W. T. COX, *Assistant Forest Inspector*, Monte Vista, Colo.

W. W. CLARK, *Assistant Forest Inspector*, Grantsville, Utah.

F. W. REED, *Assistant Forest Inspector*, St. Anthony, Idaho.

W. C. HODGE, Jr., *Assistant Forest Inspector*, Washington, D. C.



## FOREST MANAGEMENT.

THOMAS H. SHERRARD, Assistant Forester in Charge.

Timber Sales, A. K. CHITTENDEN, *Forest Inspector*.

Timber In- spection,	{	E. E. CARTER, <i>Forest Inspector</i> , Klamath Falls, Oreg.
		C. S. CHAPMAN, <i>Forest Inspector</i> , Boise, Idaho.
		W. B. GREELEY, <i>Forest Inspector</i> , 180 Perry street, Oakland, Cal.
		P. G. REDINGTON, <i>Forest Inspector</i> , Piedmont, Wyo.
		K. W. WOODWARD, <i>Assistant Forest Inspector</i> , Santa Fe, N. Mex.
		J. S. HOLMES, <i>Assistant Forest Inspector</i> , Paradise, Ariz.
		W. G. WEIGLE, <i>Assistant Forest Inspector</i> , Anaconda, Mont.
		C. A. LYFORD, <i>Assistant Forest Inspector</i> , Washington, D. C.
Logging In- spection,	{	S. J. RECORD, <i>Assistant Forest Inspector</i> , Lebanon, Mo.
		E. S. BRUCE, <i>Expert Lumberman</i> , Sheridan, Wyo.
		W. E. LA FOUNTAIN, <i>Assistant Forest Inspector</i> , Lander, Wyo.
		E. M. HAMILTON, <i>Expert</i> , Deadwood, S. Dak.
		T. J. GARVIN, <i>Expert</i> , Livingston, Mont.
		A. J. NORTON, Williams, Ariz.

Cooperation, A. B. PATTERSON, *Assistant Forest Inspector*.

## PROJECTS.

## TIMBER SALES.

*Arizona*.—Examination of proposed timber sales, Santa Catalina Forest Reserve—F. E. AMES, Tucson.

*California*.—Examination of proposed timber sales, Plumas and Diamond Mountain forest reserves—W. G. DURBIN, Beckwith.

Examination of proposed timber sales, Shasta Forest Reserve—P. T. HARRIS, La Moine; assistant, A. G. SOARES.

Examination of proposed timber sales, Sierra Forest Reserve—I. F. ELDREDGE, Fresno; assistants, H. G. CALKINS, B. G. GOLDSMITH, and J. M. CHANDLER.

*Idaho*.—Examination of proposed timber sales, Sawtooth and Payette reserves—S. MOORE, Boise.

Working plan for Henrys Lake Forest Reserve—J. G. PETERS, St. Anthony; A. T. BOISEN and C. A. GALARNEAU.

*Missouri*.—Study of forest conditions in cooperation with the Missouri Experiment Station—S. J. RECORD, Lebanon; assistants, F. M. PATTON and J. F. PRESTON.

*Montana*.—Examination of proposed timber sales, Helena Forest Reserve—E. H. CLAPP, Helena.

Examination of proposed timber sales, Hell Gate Forest Reserve—R. Y. STUART, Missoula.

Examination of proposed timber sales, Absaroka division of the Yellowstone Forest Reserve—J. E. KEACH, Livingston.

*New Mexico*.—Examination of proposed timber sales, Jemez Forest Reserve—A. B. RECKNAGEL, Santa Fe.

*Oregon*.—Examination of proposed timber sales, Cascade Forest Reserve (North)—G. M. HOMANS, Custom-house, Portland.

*South Dakota*.—Examination of proposed cutting of insect-killed timber, Black Hills Forest Reserve—H. C. NEEL, Deadwood.

*Wyoming*.—Examination of proposed timber sales, Yellowstone Forest Reserve—I. T. WORTHLEY, Cody.

Examination of proposed timber sales, Uinta Forest Reserve—L. L. WHITE, Piedmont.

## COOPERATIVE.

*California.*—Study of forest conditions in cooperation with the State—A. W. COOPER, Sacramento.

*New Hampshire.*—Study of woodlot and forest conditions in southern New Hampshire, in cooperation with the State—B. MACKAYE, Cheshire House, Keene.

Working plan for Pennichuck Water Company, Nashua—B. MACKAYE, Cheshire House, Keene; assistants, E. S. WOODRUFF and L. S. MURPHY.

*Wisconsin.*—Working plans for timber sales on Indian reservations—E. M. GRIFFITH, State forester, Madison; assistant, J. A. HOWARTH, Reserve.

*Eastern States.*—Forest conditions in New England—AUSTIN CARY, Brunswick, Me.

*New England States.*—Examination of woodlots and timber tracts—WESLEY BRADFIELD, Washington, D. C.

## DENDROLOGY.

GEO. B. SUDWORTH, Assistant Forester, in Charge.

## PROJECTS.

*California.*—Study of tanbark trees of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley.

Special studies of little-known California trees—four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY, Leland Stanford University.

*Florida.*—Study of improved methods of turpentine, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs.

*Maryland.*—Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

*North Carolina.*—Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON (directed by Dr. CHAS. H. HERTY, Professor of Chemistry), Chapel Hill.

*Texas.*—Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin.

## FOREST EXTENSION.

ERNEST A. STERLING, Assistant Forester, in Charge.

Inspection. { G. W. PEAVY, in Charge, Pasadena, Cal.  
S. N. SPRING, Cooperative Inspection, Leadville, Colo.  
G. B. LULL, Sacramento, Cal.

Cooperative Planting, R. C. BRYANT.

Reserve Planting, L. C. MILLER, Paradise, Ariz.

## PROJECTS.

*Arizona.*—Investigation of city watersheds and establishment of rangers' nurseries, Pinal Mountains, Santa Rita, and Chiricahua forest reserves—L. C. MILLER, Paradise.

*California.*—Study of planted timber in cooperation with the State—S. J. FLINTHAM, Hotel Hollenbeck, Los Angeles.

Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena; assistant, B. R. H. D'ALLEMAND, Santa Barbara.

Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena; assistants, S. Y. PARNAY, H. C. MUZZALL, and WILBUR ANDERSON.

Establishment of rangers' nurseries—T. P. LUKENS, Yosemite.

*Colorado.*—Nursery and planting work, Pikes Peak Forest Reserve—S. B. DETWILER, Colorado City; assistant, J. F. KÜMMEL.

*Hawaii.*—Cooperative experimental planting—R. S. HOSMER, Honolulu.



*Idaho.*—Establishment of forest nursery, Bear River Forest Reserve—A. E. OMAN, Weston.

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. D. GUTHRIE, Boise.

*Mississippi.*—Study of forest problems, in cooperation with the State Agricultural and Mechanical College—GEO. L. CLOTHIER, Agricultural College.

*Montana.*—Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. F. BOND, Helena.

*Nebraska and Colorado.*—Study for tree planting on irrigated lands in the South Platte valley—F. G. MILLER, Greeley, Colo.

Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey, Nebr.; assistants, W. H. MAST, E. B. FROTHINGHAM, and LA MORE BESLEY.

*Nevada.*—Study for tree planting in the Truckee-Carson irrigation project—E. O. SIECKE, Hazen.

*New Mexico.*—Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard; assistant, W. B. HADLEY.

Establishment of rangers' nurseries, Gila Forest Reserve—W. R. MATTOON, Fort Bayard.

Investigation of city watersheds and establishment of rangers' nurseries, Pecos River Forest Reserve—H. P. BAKER, Santa Fe.

*Pennsylvania.*—Preparation of planting plan for the Lehigh Coal and Navigation Company—A. S. PECK, Tobyhanna.

*Utah.*—Nursery work on the Salt Lake Forest Reserve—EDWARD C. CLIFFORD, Silver Lake.

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. M. FETHEROLF, Silver Lake.

*General Studies.*—Preliminary examination of lands of Union Pacific Railroad, in cooperation with the company—C. A. SCOTT, Rawlins, Wyo.; assistant, F. J. PHILIPS.

Preparation of planting plans in Wisconsin and Minnesota and investigations of city watersheds on forest reserves in Colorado and Utah—S. N. SPRING, Leadville, Colo.; assistant, WILLIAM H. VON BAYER.

## FOREST PRODUCTS.

R. S. KELLOGG, Acting in Charge.

Inspection, HENRY GRINNELL.

Forest Measurements, JOHN FOLEY.

Wood Preservation, W. F. SHERFESEE, *Acting*.

Wood Chemistry, A. L. DEAN.

Wood Utilization, R. S. KELLOGG.

Reserve Engineering, ————.

## PROJECTS.

*California.*—Tests of the strength of eucalyptus wood, in cooperation with the University of California—L. E. HUNT, Berkeley.

Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in southern California—W. R. WHEATON, Hotel Lillie, Los Angeles; assistant, O. T. SWAN.

*Colorado.*—Administrative inspection—W. L. HALL, Vendome Hotel, Leadville.

Study of the uses of dead and mature timber on forest reserves—E. R. HODSON, Glenwood Springs, H. S. SACKETT, Gunnison.

*Connecticut.*—Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—Prof. J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven; assistants, O. P. M. GOSS and CORNELIUS BARRY.

Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven; assistants, ERNEST BATEMAN and D. C. PARMELEE.

*Indiana*.—Timber testing at Lafayette, in cooperation with Purdue University—Dr. W. K. HATT, Lafayette; assistants, H. S. BETTS and J. A. NEWLIN.

Study of woods used in the vehicle industry—H. B. HOLROYD, Lafayette.

*Maryland*.—Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton.

*Massachusetts*.—Experiments to determine the value of various woods for pulp—A. D. LITTLE, 93 Broad street, Boston, and H. S. BRISTOL, 696 East First street, South Boston.

*Michigan*.—Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and the Wisconsin Central railway companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba; assistants, C. E. FEAGIN and W. H. KEMPFER.

*Oregon*.—Tests of the strength of red fir, in cooperation with the University of Oregon—J. B. KNAPP, Eugene.

*Pennsylvania*.—Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, Jr., care Philadelphia and Reading Coal and Iron Company, Pottsville; assistant, C. J. HUMPHREY.

*Utah*.—Study of the uses of dead and mature timber on forest reserves—J. D. WARNER, Beaver.

*Virginia*.—Experiments in grading, seasoning, and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—M. C. JENSEN, Norfolk.

*Washington*.—Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle.

Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma.

*Wyoming*.—Study of the uses of dead and mature timber in forest reserves—FREDERICK DUNLAP, Saratoga.

*General Studies*.—Collection of statistics of forest products for year 1905—H. M. HALE, Washington, D. C.; GEORGE K. SMITH, Victoria Building, St. Louis, Mo.

Study of lumber prices—A. H. PIERSON, Washington, D. C.

Study of commercial processes of wood distillation—W. C. GEER, Washington, D. C.

Study of paving woods—C. L. HILL, Washington, D. C.

Study of preservative treatment of piling—C. S. SMITH, Washington, D. C.

Study of treating-plant construction and methods—C. G. CRAWFORD, Washington, D. C.

## PUBLICATION AND EDUCATION.

HERBERT A. SMITH, Editor, in Charge.

Silvics, RAPHAEL ZON.

Review, FINDLEY BURNS.

Information, TREADWELL CLEVELAND, Jr.

Education, HERBERT A. SMITH.

Printing, QUINCY R. CRAFT.

## PUBLICATIONS.

*Extracts* from the Yearbook of the Department of Agriculture for 1905, as follows:

No. 376.—How to Grow Young Trees for Forest Planting, by E. A. Sterling.



No. 395.—Prolonging the Life of Telephone Poles, by Henry Grinnell.

*Press Bulletins*, as follows:

No. 136.—Profits from Forest Reserves to be Shared by Counties.

No. 137.—Utilization of Fire-killed Timber in Colorado.

No. 138.—Timber Used in Anthracite Coal Mines.

No. 139.—Production of Ale and Beer Barrel Stock in 1905.

### PROJECTS.

*New Hampshire*.—Location of permanent sample plots—GEORGE HEWITT MYERS and W. D. STERRETT, Waterville; assistants, R. WEITKNECHT and W. D. CLARK.

*Middle Western States*.—Public lectures before chautauquas and normal institutes delivered by THOMAS E. WILL in the following places: July 16, Marion, Ind.; July 17, Cape Girardeau, Mo.; July 19, Winfield, Kans.; July 23, Alva, Okla., and Woodward, Okla.; July 24, Anthony, Kans.; July 27, Beloit, Kans., and Downs, Kans.; July 28, Clay Center, Kans.; July 31, Anadarko, Okla.; August 1, Lawton, Okla.; August 3, Perry, Okla.; August 6, Greensburg, Kans; August 7, Kinsley, Kans.

### RECORD.

JAMES B. ADAMS, Special Fiscal Agent, in Charge.

Maintenance, GEO. G. ANDERSON.

Accounts, GEO. E. KING.

Purchase, HARRY C. TOWERS.

### GRAZING.

A. F. POTTER, Inspector of Grazing, in Charge.

Inspection, { C. H. ADAMS.  
J. T. WEDEMEYER.  
W. C. CLOS.

### RESERVE ORGANIZATION.

COERT DU BOIS, Forest Inspector, in Charge.

Reserve Districts, { Northern District, F. A. SILCOX.  
Western District, T. S. WOOLSEY, Jr.  
Southern District, SMITH RILEY.

Reserve Boundaries, COERT DU BOIS.

### PROJECTS.

*Arizona*.—Examination of lands for new forest reserves, additions to and eliminations from existing reserves—W. H. B. KENT, Washington, D. C.; assistants, H. O. STABLER, Flagstaff, Ariz., and S. G. SMITH, Gallup, N. Mex.

*California*.—Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—W. H. B. KENT, Washington, D. C.; assistants, R. W. AYRES, care R. H. CHARLTON; Los Angeles, Cal.

*Hawaii*.—Examination of lands for new forest reserves, additions to and eliminations from existing reserves—R. S. HOSMER, Honolulu.

*Idaho*.—Examination of lands for new forest reserves, additions to and eliminations from existing reserves—R. B. WILSON, Jackson, Wyo., and CLYDE LEAVITT, Priest River, Idaho.

*Montana*.—Examination of lands for new forest reserves, additions to and eliminations from existing reserves—R. V. R. REYNOLDS, Kalispell.

*Oregon*.—Examination of lands for new forest reserves, additions to and eliminations from existing forest reserves—L. VON WERNSTED, Ontario, Oreg.

## EXECUTIVE AND PROTECTIVE FORCE ON RESERVES.

## ALASKA.

Afognak and Alexander Archipelago forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan, Alaska.

## ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; J. H. ALLISON, Forest Assistant, Flagstaff, Ariz.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise, Ariz.; H. D. BURRALL, Forest Assistant, Paradise, Ariz.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia, Ariz.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; J. H. ALLISON, Forest Assistant, Flagstaff, Ariz.; PATRICK A. FENTON, Forest Ranger, Grand Canyon, Ariz.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford, Ariz.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe, Ariz.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott, Ariz.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff, Ariz.; J. H. ALLISON, Forest Assistant, Flagstaff, Ariz.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.; H. D. BURRALL, Forest Assistant, Paradise, Ariz.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson, Ariz.; H. D. BURRALL, Forest Assistant, Paradise, Ariz.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Roosevelt, Ariz.

## CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka, Cal.; C. J. BUCK, Forest Assistant, Paradise, Ariz.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.; JOSEPH C. LA PLANT, Forest Ranger, Burney, Cal.

Modoc Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas, Cal.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy, Cal.; A. R. POWERS, Forest Assistant, Quincy, Cal.

San Bernardino Forest Reserve—R. H. CHARLTON, Acting Forest Supervisor, Los Angeles, Cal.; NELS O. TORSTENSON, Forest Ranger, San Bernardino, Cal.

San Gabriel Forest Reserve—R. H. CHARLTON, Acting Forest Supervisor, Los Angeles, Cal.; B. H. CROW, Forest Ranger, Pasadena, Cal.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara, Cal.; J. REBMANN, Forest Assistant, Santa Barbara, Cal.; STEPHEN H. DOUGLASS, Forest Ranger, Ventura, Cal.

Shasta Forest Reserve—G. A. COLEMAN, Forest Supervisor, Sisson, Cal.; F. H. HAFLEY, Deputy Forest Supervisor, Sisson, Cal.; R. C. HACKLEY, Forest Assistant, Sisson, Cal.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork, Cal.; ERNEST BRITTEN, Forest Ranger, Three Rivers, Cal.; H. J. BROWN, Forest Assistant, Northfork, Cal.



Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia, Cal.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Supervisor, Sonora, Cal.

Tahoe Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.; M. B. PRATT, Forest Assistant, Nevada City, Cal.; JNO. C. WELLS, Forest Ranger, Nevada City, Cal.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Vallevista, Cal.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaverville, Cal.; C. J. BUCK, Forest Assistant, Yreka, Cal.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas, Cal.

Yuba Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City, Cal.; M. B. PRATT, Forest Assistant, Nevada City, Cal.

#### COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran, Colo.; T. D. WOODBURY, Forest Assistant, Collbran, Colo.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt, Colo.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison, Colo.; T. D. WOODBURY, Forest Assistant, Collbran, Colo.

Fruita Forest Reserve—H. K. PORTER, Forest Supervisor, Delta, Colo.

Holy Cross Forest Reserve—SHEP N. HUSTED, Forest Ranger in Charge, Glenwood Springs, Colo.; F. H. MORRILL, Forest Assistant, Glenwood Springs, Colo.

Leadville Forest Reserve—WILLIAM W. HOOPER, Forest Ranger in Charge, Leadville, Colo.; M. SMITH, Forest Assistant, Leadville, Colo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango, Colo.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling, Colo.

Pikes Peak Forest Reserve—FRANK R. SHERWIN, Forest Ranger in Charge, Denver, Colo.; F. D. WHITNEY, Forest Ranger, Denver, Colo.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe, Colo.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Monte Vista, Colo.; W. J. MORRILL, Forest Assistant, Monte Vista, Colo.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Delta, Colo.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe, Colo.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker, Colo.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia, Idaho; J. E. BARTON, Forest Assistant, Kooskia, Idaho.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony, Idaho; J. F. BRUINS, Forest Assistant, St. Anthony, Idaho.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho; C. E. DUNSTON, Forest Assistant, Boise, Idaho.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello, Idaho.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Williams, Idaho.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise, Idaho; C. E. DUNSTON, Forest Assistant, Boise, Idaho.

Weiser Forest Reserve—JOHN B. LAFFERTY, Forest Supervisor, Weiser, Idaho.

## KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

## MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake, Minn.; W. R. MCKINNON, MARK BURNS, GEORGE FARLEY, J. S. BAIRD, W. N. BRADISH, and SEWELL TIBBETTS, Forest Rangers, Cass Lake, Minn.; FRANK TOMKINS and H. A. BLILER, Forest Agents, Cass Lake, Minn.

## MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.; M. K. STICKNEY, Forest Assistant, Townsend, Mont.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Helena Forest Reserve—DWIGHT BUSHNELL, Forest Supervisor, Helena, Mont.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, Mont.; M. K. STICKNEY, Forest Assistant, Townsend, Mont.

Gallatin Forest Reserve—DAVID CONKLING, Forest Supervisor, Bozeman, Mont.; DORR SKEELS, Forest Assistant, Bozeman, Mont.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula, Mont.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood, Mont.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell, Mont.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell, Mont.; D. G. KINNEY, Forest Assistant, Kalispell, Mont.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart, Mont.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City, Mont.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Linley, Mont.

## NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

North Platte Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

## NEW MEXICO.

Gila Forest Reserve—R. C. MCCLURE, Forest Supervisor, Silver City, N. Mex.; M. SMITH, Forest Assistant, Silver City, N. Mex.; A. O. WAHA, Forest Assistant, Silver City, N. Mex.; RUFUS K. WADE, Forest Ranger, Mogollon, N. Mex.

Jemez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.; A. D. READ, Forest Assistant, Santa Fe, N. Mex.

Lincoln Forest Reserve—JOHN KERR, Forest Supervisor, Capitan, N. Mex.; A. C. RINGLAND, Forest Assistant, Capitan, N. Mex.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe, N. Mex.; A. D. READ, Forest Assistant, Santa Fe, N. Mex.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales, N. Mex.

## OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache, Okla.



## OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.; R. F. HAMMATT, Forest Assistant, Roseburg, Oreg.

Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.; HENRY IRELAND, Deputy Forest Ranger, Prineville, Oreg.

Blue Mountains Forest Reserve (Eastern Division)—D. B. SHELLER, Forest Superintendent in Charge, Sumpter, Oreg.; S. S. TERRELL, Forest Supervisor, Sumpter, Oreg.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. CAHOON, Forest Assistant, Portland, Oreg.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland, Oreg.; A. E. CAHOON, Forest Assistant, Portland, Oreg.; MILTON J. ANDERSON, Forest Ranger, The Dalles, Oreg.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg, Oreg.; R. F. HAMMATT, Forest Assistant, Roseburg, Oreg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville, Oreg.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa, Oreg.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

## SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.; R. P. IMES, Forest Assistant, Deadwood, S. Dak.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

## UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante, Utah.

Bear River Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver, Utah.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George, Utah.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont, Utah.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville, Utah.

La Sal Forest Reserve—ORRIN C. SNOW, Forest Ranger in Charge, Castleton, Utah.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim, Utah.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson, Utah.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Supervisor, Murray, Utah.

Sevier Forest Reserve—BEAUREGARD KENNER, Forest Ranger in Charge, Parowan, Utah.

Uinta Forest Reserve—WILLARD I. PACK, Forest Supervisor, Provo, Utah; H. F. STUDLEY, Forest Assistant, Provo, Utah.

## WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting, Wash.; CHAS. E. RANDLE, Forest Ranger, Fairfax, Wash.; C. H. FLORY, Forest Assistant, Orting, Wash.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspport, Wash.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas, Wash.; W. M. DRAKE, Forest Assistant, Sumas, Wash.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan, Wash.

#### WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Big Horn, Wyo.; P. T. COOLIDGE, Forest Assistant, Big Horn, Wyo.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale, Wyo.; G. H. CECIL, Forest Assistant, Wapiti, Wyo.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson, Wyo.; CLARENCE N. WOODS, Forest Ranger, Jackson, Wyo.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti, Wyo.; HARRY THURSTON, Forest Ranger, Marquette, Wyo.

### SERVICE CHANGES IN JULY.

#### APPOINTMENTS.

##### Law—

F. L. HARVEY, Expert, at \$1,600 per annum.

##### Forest Management—

W. W. ASHE, Forest Assistant, at \$1,000 per annum.

D. C. A. GALARNEAU, Forest Assistant, at \$1,000 per annum.

J. E. KEACH, Forest Assistant, at \$1,000 per annum.

FRED E. AMES, Forest Assistant at \$1,000 per annum.

A. B. RECKNAGEL, Forest Assistant, at \$1,000 per annum.

SYDNEY L. MOORE, Forest Assistant, at \$1,000 per annum.

ROBERT Y. STUART, Forest Assistant, at \$1,000 per annum.

J. A. HOWARTH, Jr., Forest Assistant, at \$1,000 per annum.

The following persons were appointed Forest Students at a salary of \$300 per annum:

R. W. WALKER, J. M. CHANDLER, B. C. GOLDSMITH, R. A. HALLORAN, H. C. CALKINS, A. G. SOARES, L. BRADLEY, L. S. MURPHY, E. S. WOODRUFF, J. F. PRESTON, and W. O. DAVIS.

##### Forest Extension—

E. C. CLIFFORD, Forest Assistant, at \$1,000 per annum.

E. O. SIECKE, Forest Assistant, at \$1,000 per annum.

E. H. FROTHINGHAM, Forest Assistant, at \$1,000 per annum.

ALLEN S. PECK, Forest Assistant, at \$1,000 per annum.

A. E. OMAN, Forest Assistant, at \$1,000 per annum.

F. J. PHILLIPS, Forest Assistant, at \$1,000 per annum.

##### Forest Products—

H. S. SACKETT, Forest Assistant, at \$1,000 per annum.

C. J. HUMPHREY, Forest Assistant, at \$1,000 per annum.

W. H. KEMPFER, Forest Assistant, at \$1,000 per annum.

M. C. JENSEN, Forest Agent, at \$720 per annum.

M. A. J. SKJOLDAL, Laborer, at \$480 per annum.



**Publication and Education—**

BRISTOW ADAMS, Expert, at \$1,200 per annum.

**Record—**

A. R. MARTIN, Clerk, at \$600 per annum.

MISS MARIE SIMONSON, Clerk, at \$480 per annum.

MARSHALL MILLER, Messenger, at \$360 per annum.

T. K. GOLDSBERRY, Messenger, at \$360 per annum.

**Reserve Organization--**

E. T. ALLEN, Forest Inspector, at \$2,400 per annum; assigned to Washington and Oregon.

WILLIAM J. MILLER, Clerk, at \$600 per annum; assigned to Wallowa Forest Reserve, Oreg.

PAUL N. HUMPHREY, Clerk, at \$900 per annum; assigned to Big Horn Forest Reserve, Wyo.

F. C. PORTER, Clerk, at \$720 per annum; assigned to Lewis and Clark Forest Reserve (South), Mont.

The following persons were appointed Forest Assistants, at \$1,000 per annum:

M. N. STICKNEY, assigned to the Helena, Big Belt, and Elkhorn forest reserves, Montana.

JOHN H. ALLISON, assigned to the San Francisco Mountains Forest Reserve, Arizona.

R. F. HAMMATT, assigned to the Cascade Forest Reserve (South), Oregon.

WILLARD M. DRAKE, assigned to the Washington Forest Reserve (West), Washington.

CHARLES H. FLORY, assigned to the Mount Rainier Forest Reserve, Washington.

ARTHUR D. READ, assigned to the Jemez Forest Reserve, New Mexico.

R. L. FROMME, assigned to the Priest River Forest Reserve, Idaho.

B. P. KIRKLAND, assigned to the Yellowstone Forest Reserve (Absaroka Division), Montana.

P. T. COOLIDGE, assigned to the Big Horn Forest Reserve, Wyoming.

J. F. BRUINS, assigned to the Henrys Lake Forest Reserve, Idaho.

FRED J. MORRELL, assigned to the Holy Cross Forest Reserve, Colorado.

HORACE F. STUDLEY, assigned to the Uinta Forest Reserve, Utah.

DORR SKEELS, assigned to the Gallatin Forest Reserve, Montana.

W. W. WHITE, assigned to the Bitter Root and Hell Gate forest reserves, Montana.

H. B. BURRALL, assigned to the Chiricahua, Santa Rita, and Santa Catalina forest reserves, Arizona.

W. H. B. KENT, assigned to section of reserve boundaries.

The following persons were appointed Forest Assistants, at \$900 per annum:

R. C. HACKLEY, assigned to Shasta Forest Reserve, California.

C. E. DUNSTON, assigned to the Payette and Sawtooth forest reserves, Idaho.

The following persons were appointed Assistant Forest Rangers, at \$900 per annum, upon certification by the Civil Service Commission:

AXEL LARSEN, Washington Forest Reserve (West), Washington.

ALEXANDER O. McDONALD, Gunnison Forest Reserve, Colorado.

JAMES BANNETT, Montezuma Forest Reserve, Colorado.

LESLIE O. BANNISTER, San Bernardino Forest Reserve, California.

The following persons were appointed Forest Guards, at \$720 per annum:

- J. D. COCHRAN, Cascade Forest Reserve (South), Oregon.  
 HUGH M. GUTHRIE, Cascade Forest Reserve (North), Oregon.  
 T. C. SPAULDING, Lewis and Clark Forest Reserve (South), Montana. (On temporary detail to Hell Gate Forest Reserve.)  
 THOMAS F. WELLS, San Francisco Mountains Forest Reserve, Arizona.  
 ALBERT BAKER, Wenaha Forest Reserve, Washington.  
 JOHN SHIELDS, White River Forest Reserve, Colorado.  
 J. A. McNAMARA, Medicine Bow Forest Reserve, Colorado.  
 DAVID O. THUERER, Logan Forest Reserve, Utah.  
 ISADORE KIERMEYER, Helena Forest Reserve, Montana.  
 ROBERT T. STACUPE, Madison Forest Reserve, Montana.  
 JAMES L. BIXBY, Olympic Forest Reserve, Washington.  
 J. F. WESTFALL, Santa Catalina Forest Reserve, Arizona.  
 NEWTON GARNER, Santa Barbara Forest Reserve, California.  
 IRVING SMITH, Battlement Mesa Forest Reserve, Colorado.  
 RAYMOND A. BOWEN, Pikes Peak Forest Reserve, Colorado.  
 THOMAS E. JACQUES, Uncompahgre Forest Reserve, Colorado.  
 WILLIAM MCGHIE, Salt Lake Forest Reserve, Utah.  
 JOSIAH SCHURTZ, Aquarius Forest Reserve, Utah.  
 JOHN C. BENSON, Sevier Forest Reserve, Utah.  
 ROBERT THOMPSON, Mount Graham Forest Reserve, Arizona.  
 EDWARD J. REDINGTON, Yuba Forest Reserve, California.  
 J. D. MCGEE, Mount Rainier Forest Reserve, Washington.  
 HARRY H. VANDUSEN, San Jacinto Forest Reserve, California.  
 P. L. GOOLDY, Park Range Forest Reserve, Colorado.  
 JOHN R. BARBER, Pinal Mountains Forest Reserve, Arizona.  
 L. A. SWALLOW, San Isabel Forest Reserve, Colorado.  
 J. FRED McCLAIN, Chesnimnus Forest Reserve, Oregon.  
 JAMES W. PATTON, JAMES T. GRAY, WILBUR R. HUESTIS, CLARENCE A. CHAMBERLAIN, and GEORGE H. BARNEY, Trinity Forest Reserve, California.  
 J. L. WINTERS, C. W. VON WELKER, W. A. FREEMAN, and ARTHUR BENNETT, Blue Mountains Forest Reserve (West), Oregon.  
 JAMES O. BUCKHOLZ, FRED C. COOPER, and SIMON OLESON, Leadville Forest Reserve, Colorado.  
 HARRY L. CASTLE and CHARLES REEDY, Tonto Forest Reserve, Arizona.  
 JOSEPH M. BOULTER, JESSE P. MORTIMORE, and CHARLES J. BAYER, Yellowstone Forest Reserve (Wind River Division), Wyoming.  
 C. W. TOWLE and HARRY KRUGER, Tahoe Forest Reserve, California.  
 ROBERT W. McDONALD, EDWARD W. VANCE, and DANIEL C. KERR, Gunnison Forest Reserve, Colorado.  
 FRANK E. RICE, D. W. HILDEBRAND, HENRY C. YOUNG, JAMES O. MORROW, J. W. LEEPEIR, WILLIAM H. BROWN, ALLEN BASYE, and JAMES F. SWANK, Sierra Forest Reserve (South), California.  
 ARTHUR W. BARTLETT, EDWARD K. STRONG, SHELDON CHENEY, and W. J. CLARK, Sierra Forest Reserve (North), California.  
 THOMAS CROSSLEY, PATRICK H. KELLY, and WILLIAM STARWALT, Bitter Root Forest Reserve, Idaho.  
 WOODSON JEFFREYS, BERT BILLS, LOUIS KOSKI, ARDEN BIGGERSTAFF, and H. S. ERWIN, Weiser Forest Reserve, Idaho.  
 HARRY H. ELLISON, HENRY MCGUINNESS, PRESS S. PRICE, ALLEN HODGSON, and EDWARD P. STEWART, Shasta Forest Reserve, California.



GUY L. ATKINSON and FRANK B. NOTESTEIN, San Juan Forest Reserve, Colorado.

JOHN W. PRALL, W. A. JOHNSON, HENRY S. MUSGRAVE, PHIL STEVENS, E. R. WALKER, NOAH W. WALLACE, JERRY HORNE, JOHN DAVIS, and A. W. LEWIS, Klamath Forest Reserve, California.

ASA E. YATES, WILLIAM GUTHRIE, and H. B. YERKER, Yellowstone Forest Reserve (Absaroka Division), Montana.

GEORGE A. BONEBRAKE, Cascade Forest Reserve (South), Oregon.

W. R. STEAD, Yuba Forest Reserve, California.

WILLIAM S. PADDOCK, Weiser Forest Reserve, Idaho.

#### PROMOTED.

The following promotions in the technical force were made for efficiency:

##### Law—

G. W. WOODRUFF, from \$2,300 per annum to \$2,500 per annum.

##### General Inspection—

ELERS KOCH, from \$1,600 per annum to \$1,700 per annum.

SMITH RILEY, from \$1,600 per annum to \$1,700 per annum.

W. W. CLARK, from \$1,500 per annum to \$1,700 per annum.

F. W. REED, from \$1,400 per annum to \$1,600 per annum.

W. T. COX, from \$1,400 per annum to \$1,500 per annum.

M. L. ERICKSON, from \$1,000 per annum to \$1,200 per annum.

##### Forest Management—

A. K. CHITTENDEN, from \$1,800 per annum to \$2,000 per annum.

H. S. MEEKHAM, from \$1,600 per annum to \$1,800 per annum.

C. S. CHAPMAN, from \$1,400 per annum to \$1,600 per annum.

P. G. REDINGTON, from \$1,300 per annum to \$1,400 per annum.

K. W. WOODWARD, from \$1,200 per annum to \$1,400 per annum.

W. G. WEIGLE, from \$1,200 per annum to \$1,400 per annum.

G. M. HOMANS, from \$1,200 per annum to \$1,300 per annum.

C. A. LYFORD, from \$1,200 per annum to \$1,300 per annum.

A. B. PATTERSON, from \$1,200 per annum to \$1,300 per annum.

S. J. RECORD, from \$4.50 per diem to \$1,300 per annum.

E. H. CLAPP, from \$1,000 per annum to \$1,200 per annum.

A. T. BOISEN, from \$1,000 per annum to \$1,200 per annum.

J. S. HOLMES, from \$1,000 per annum to \$1,200 per annum.

B. MACKAYE, from \$1,000 per annum to \$1,200 per annum.

L. L. WHITE, from \$1,000 per annum to \$1,200 per annum.

P. T. HARRIS, from \$1,000 per annum to \$1,200 per annum.

W. B. PIPER, from \$1,000 per annum to \$1,100 per annum.

E. M. GRIFFITH, from \$300 per annum to \$500 per annum.

##### Dendrology—

C. D. MELL, from \$1,000 per annum to \$1,200 per annum.

##### Forest Extension—

E. A. STERLING, from \$2,000 per annum to \$2,200 per annum.

R. C. BRYANT, from \$1,800 per annum to \$2,000 per annum.

S. N. SPRING, from \$1,400 per annum to \$1,500 per annum.

L. C. MILLER, from \$1,300 per annum to \$1,500 per annum.

W. R. MATTOON, from \$1,200 per annum to \$1,300 per annum.

J. FETHEROLF, from \$1,100 per annum to \$1,300 per annum.

S. J. FLINTHAM, from \$1,100 per annum to \$1,300 per annum.

G. B. LULL, from \$1,100 per annum to \$1,300 per annum.

G. W. PEAVY, from \$1,100 per annum to \$1,300 per annum.  
 S. B. DETWEILER, from \$1,100 per annum to \$1,200 per annum.  
 J. F. BOND, from \$1,000 per annum to \$1,100 per annum.  
 W. B. HADLEY, from \$1,000 per annum to \$1,100 per annum.  
 W. M. MAST, from \$1,000 per annum to \$1,100 per annum.  
 W. H. VON BAYER, from \$900 per annum to \$1,000 per annum.

#### **Forest Products—**

JOHN FOLEY, from \$1,800 per annum to \$1,900 per annum.  
 C. G. CRAWFORD, from \$1,700 per annum to \$1,800 per annum.  
 HENRY GRINNELL, from \$1,600 per annum to \$1,800 per annum.  
 C. A. KOLB, from \$1,600 per annum to \$1,800 per annum.  
 H. S. BETTS, from \$1,500 per annum to \$1,600 per annum.  
 H. D. TIEMANN, from \$1,400 per annum to \$1,500 per annum.  
 R. S. KELLOGG, from \$1,300 per annum to \$1,400 per annum.  
 F. DUNLAP, from \$1,100 per annum to \$1,200 per annum.  
 R. W. AYRES, from \$1,100 per annum to \$1,300 per annum.  
 CLYDE LEAVITT, from \$1,100 per annum to \$1,300 per annum.  
 ROLF THELEN, from \$1,000 per annum to \$1,200 per annum.  
 J. B. KNAPP, from \$1,000 per annum to \$1,200 per annum.  
 M. CLINE, from \$1,000 per annum to \$1,200 per annum.  
 J. C. NOEL, from \$1,000 per annum to \$1,200 per annum.  
 W. R. WHEATON, from \$1,000 per annum to \$1,200 per annum.  
 H. M. HALE, from \$1,000 per annum to \$1,200 per annum.  
 W. F. SHERFESEE, from \$1,000 per annum to \$1,200 per annum.  
 H. F. WEISS, from \$1,000 per annum to \$1,200 per annum.  
 J. M. NELSON, from \$1,000 per annum to \$1,200 per annum.  
 C. L. HILL, from \$1,000 per annum to \$1,200 per annum.  
 E. R. HODSON, from \$1,000 per annum to \$1,100 per annum.  
 J. D. WARNER, from \$1,000 per annum to \$1,100 per annum.  
 H. B. HOLROYD, from \$1,000 per annum to \$1,100 per annum.  
 C. S. SMITH, from \$1,000 per annum to \$1,100 per annum.  
 O. T. SWAN, from \$1,000 per annum to \$1,100 per annum.  
 J. A. NEWLIN, from \$1,000 per annum to \$1,100 per annum.  
 O. P. M. GOSS, from \$1,000 per annum to \$1,100 per annum.  
 E. A. ZEIGLER, from \$1,000 per annum to \$1,100 per annum.  
 J. P. WENTLING, from \$900 per annum to \$1,000 per annum.

#### **Publication and Education—**

H. A. SMITH, from \$2,200 per annum to \$2,500 per annum.  
 T. CLEVELAND, Jr., from \$1,700 per annum to \$1,800 per annum.  
 G. H. MYERS, from \$1,200 per annum to \$1,400 per annum.  
 W. D. STERRETT, from \$1,000 per annum to \$1,200 per annum.

#### **Record—**

JAMES B. ADAMS, from \$2,500 per annum to \$2,700 per annum.

#### **Reserve Organization—**

COERT DU BOIS, from \$1,800 per annum to \$2,000 per annum.  
 R. E. BENEDICT, from \$1,800 per annum to \$2,000 per annum.  
 R. P. IMES, from \$1,300 per annum to \$1,500 per annum.  
 R. B. WILSON, from \$1,300 per annum to \$1,400 per annum.  
 C. G. SMITH, from \$1,100 per annum to \$1,300 per annum.  
 T. S. WOOLSEY, JR., from \$1,100 per annum to \$1,300 per annum.  
 D. D. BRONSON, from \$1,200 per annum to \$1,400 per annum.  
 A. C. RINGLAND, from \$1,000 per annum to \$1,200 per annum.



R. V. R. REYNOLDS, from \$1,000 per annum to \$1,200 per annum.

F. A. SILCOX, from \$1,000 per annum to \$1,200 per annum.

H. J. BROWN, from \$1,000 per annum to \$1,200 per annum.

A. O. WAHA, from \$1,000 per annum to \$1,200 per annum.

G. H. CECIL, from \$1,000 per annum to \$1,200 per annum.

C. J. BUCK, from \$1,000 per annum to \$1,200 per annum.

W. J. MORRILL, from \$1,000 per annum to \$1,200 per annum.

J. H. RAMSKILL, from \$1,000 per annum to \$1,200 per annum.

M. D. PRATT, from \$1,000 per annum to \$1,200 per annum.

S. G. SMITH, from \$1,000 per annum to \$1,100 per annum.

J. E. BARTON, from \$1,000 per annum to \$1,100 per annum.

T. D. WOODBURY, from \$1,000 per annum to \$1,100 per annum.

J. REBMAN, from \$1,000 per annum to \$1,100 per annum.

L. VON WERNSTED, from \$900 per annum to \$1,000 per annum.

The following promotions in the reserve force were made for efficiency and on account of increased living expenses by reason of assignment:

E. A. SHERMAN, Forest Supervisor at \$1,500 to Forest Supervisor at \$1,800 per annum, Hell Gate and Bitter Root forest reserves, Montana.

JOHN W. FARMER, Ranger in Charge at \$1,400 to Forest Supervisor at \$1,500 per annum, Mount Graham Forest Reserve, Arizona.

E. H. CLARKE, Jr., Ranger in Charge at \$1,000 per annum to Forest Supervisor at \$1,400 per annum, Salt Lake Forest Reserve, Utah.

WILLARD I. PACK, Ranger in Charge at \$1,100 per annum to Forest Supervisor at \$1,500 per annum, Uinta Forest Reserve, Utah.

SHEP N. HUSTED, Ranger in Charge at \$1,080 per annum to Ranger in Charge at \$1,200 per annum, Holy Cross Forest Reserve, Colorado.

C. Y. WEBB, from Deputy Forest Ranger at \$1,000 per annum to Deputy Forest Ranger at \$1,100 per annum, Mount Graham Forest Reserve, Arizona.

JOHN VAN DERVENTER, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Trabuco Canyon Forest Reserve, California.

EDWIN D. HEPBURN, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Pikes Peak Forest Reserve, Colorado.

FRANK HARLEY, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,100 per annum, Klamath Forest Reserve, California.

GEORGE W. HALL, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,100 per annum, Shasta Forest Reserve, California.

ENOCH CARRINGTON, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Plumas Forest Reserve, California. Promotion made in accordance with Forest Reserve Order No. 18.

ERNEST BRITTEN, from Deputy Forest Ranger at \$1,080 per annum to Forest Ranger at \$1,200 per annum, Sierra Forest Reserve (North), California.

WILLIAM B. TAYLOR, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Sierra Forest Reserve (North), California.

SYLVESTER DEHL, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Sierra Forest Reserve (North), California.

JOEL E. CRANE, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Sierra Forest Reserve (North), California.

MALCOLM McLEOD, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Sierra Forest Reserve (North), California.

JOHN T. NODDIN, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Sierra Forest Reserve (North), California.

LEWIS BENEDICT, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, San Francisco Mountains Forest Reserve, Arizona.

LEWIS E. JOHNSON, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, San Francisco Mountains Forest Reserve, Arizona.

JOHN A. PACK, from Assistant Forest Ranger at \$900 per annum to Forest Ranger at \$1,200 per annum, Uinta Forest Reserve, Utah.

WILLIAM M. ANDERSON, from Assistant Forest Ranger at \$900 per annum to Forest Ranger at \$1,200 per annum, Uinta Forest Reserve, Utah.

The following promotions in the clerical force were made for efficiency and to fill vacancies on the statutory roll:

#### **Office of the Forester—**

A. A. WILEY, from \$1,000 per annum to \$1,100 per annum.

#### **Law—**

M. J. McVEAN, from \$1,600 per annum to \$1,800 per annum.

Miss S. R. McFADDEN, from \$720 per annum to \$800 per annum.

#### **Forest Management—**

F. LEES, from \$1,400 per annum to \$1,600 per annum.

Miss E. SIMONSON, from \$1,000 per annum to \$1,100 per annum.

Miss L. BROWER, from \$720 per annum to \$800 per annum.

#### **Dendrology—**

Miss E. M. YOUNG, from \$1,000 per annum to \$1,100 per annum.

Miss H. E. STOCKBRIDGE, from \$1,000 per annum to \$1,100 per annum.

Mrs. N. W. BRENIZER, from \$900 per annum to \$1,000 per annum.

Miss M. V. CUNNINGHAM, from \$700 per annum to \$800 per annum.

Mrs. A. A. PRYOR, from \$600 per annum to \$700 per annum.

Miss G. E. WHARTON, from \$600 per annum to \$700 per annum.

#### **Forest Products—**

J. M. WITHEROW, from \$1,200 per annum to \$1,400 per annum.

C. L. TAYLOR, from \$1,200 per annum to \$1,400 per annum.

H. F. TRIPP, from \$1,000 per annum to \$1,200 per annum.

Mrs. G. M. STODDART, from \$1,000 per annum to \$1,100 per annum.

J. S. NOEL, from \$900 per annum to \$1,200 per annum.

E. S. DEAN, from \$900 per annum to \$1,000 per annum.

T. C. COLEMAN, from \$900 per annum to \$1,000 per annum.

C. B. GOSORN, from \$900 per annum to \$1,000 per annum.

Miss E. KETTLER, from \$900 per annum to \$1,000 per annum.

Mrs. N. OWEN, from \$720 per annum to \$800 per annum.

Miss S. W. LUTTRELL, from \$720 per annum to \$800 per annum.

Miss L. STUART, from \$720 per annum to \$800 per annum.

Miss A. M. MEYNES, from \$700 per annum to \$800 per annum.

Mrs. L. V. RANCKE, from \$600 per annum to \$700 per annum.

Miss H. J. HOLBERG, from \$600 per annum to \$700 per annum.

Mrs. R. McK. SHELTON, from \$600 per annum to \$700 per annum.

Miss T. M. LOUGHRAN, from \$600 per annum to \$700 per annum.

Mrs. L. A. WILLIAMS, from \$600 per annum to \$700 per annum.

Miss A. M. TONKS, from \$600 per annum to \$700 per annum.

Miss S. P. BARKSDALE, from \$600 per annum to \$700 per annum.

Miss L. JACKSON, from \$600 per annum to \$700 per annum.

Mrs. S. W. RAMSAUR, from \$600 per annum to \$700 per annum.

Miss B. MARMION, from \$480 per annum to \$600 per annum.



**Record—**

W. H. SHIR-CLIFF, from \$1,400 per annum to \$1,600 per annum.  
 H. C. TOWERS, from \$1,300 per annum to \$1,400 per annum.  
 H. C. METCALF, from \$1,200 per annum to \$1,400 per annum.  
 A. G. VARELA, from \$1,200 per annum to \$1,400 per annum.  
 J. J. DUFFY, from \$1,200 per annum to \$1,400 per annum.  
 W. R. FUCHS, from \$1,200 per annum to \$1,400 per annum.  
 G. H. WILLIAMS, from \$1,100 per annum to \$1,200 per annum.  
 E. S. SHIPP, from \$1,000 per annum to \$1,200 per annum.  
 R. K. HELPHENSTINE, Jr., from \$1,000 per annum to \$1,100 per annum.  
 C. H. ROWDEN, from \$1,000 per annum to \$1,100 per annum.  
 H. H. ENOCH, from \$900 per annum to \$1,000 per annum.  
 C. E. GAGE, from \$900 per annum to \$1,000 per annum.  
 C. T. AUSTIN, from \$900 per annum to \$1,000 per annum.  
 A. S. BLUM, from \$900 per annum to \$1,000 per annum.  
 Miss L. B. MOSKEDAL, from \$840 per annum to \$900 per annum.  
 Miss M. R. LATIMER, from \$800 per annum to \$1,000 per annum.  
 Miss S. F. SEATON, from \$720 per annum to \$800 per annum.  
 Miss C. J. HAWKINS, from \$720 per annum to \$800 per annum.  
 Miss S. FLANAGAN, from \$720 per annum to \$800 per annum.  
 A. RUPPEL, from \$720 per annum to \$800 per annum.  
 Miss R. H. PICKETT, from \$720 per annum to \$800 per annum.  
 Mrs. M. F. RULE, from \$720 per annum to \$800 per annum.  
 Miss L. R. GARTRELL, from \$700 per annum to \$800 per annum.  
 Miss P. SANDERLIN, from \$600 per annum to \$700 per annum.  
 J. E. NELSON, from \$600 per annum to \$700 per annum.  
 W. L. WALTER, from \$600 per annum to \$700 per annum.  
 G. V. FOWLER, from \$600 per annum to \$700 per annum.  
 R. E. LEE, from \$600 per annum to \$700 per annum.  
 Miss N. E. EMERSON, from \$600 per annum to \$700 per annum.  
 A. MORRIS, from \$600 per annum to \$700 per annum.  
 Miss M. T. MILLER, from \$600 to \$700 per annum.  
 Mrs. B. B. BLACKLEY, from \$600 per annum to \$700 per annum.  
 Miss M. L. HOBGOOD, from \$600 per annum to \$700 per annum.  
 Miss M. P. ALLSTON, from \$480 per annum to \$600 per annum.  
 Miss E. M. CARMAN, from \$480 per annum to \$600 per annum.  
 Miss A. B. DAVIDSON, from \$480 per annum to \$600 per annum.  
 Miss E. S. DE PUTRON, from \$480 per annum to \$600 per annum.  
 G. L. HOFFMAN, from \$360 per annum to \$400 per annum.  
 J. S. MANSUY, from \$360 per annum to \$400 per annum.

**Grazing—**

Miss A. P. KOSCHWITZ, from \$720 per annum to \$900 per annum.  
 Mrs. J. B. BURNHAM, from \$600 per annum to \$700 per annum.

**Reserve Organization—**

Mrs. V. M. BAIN, from \$900 per annum to \$1,000 per annum.  
 Miss M. M. ECHTERMANN, from \$720 per annum to \$800 per annum.  
 Mrs. C. F. LOVE, from \$600 per annum to \$700 per annum.

**SEPARATED.**

JOHN D. STOUT, Clerk, Big Horn Forest Reserve, Wyoming.  
 THOMAS E. CHAPLIN, Forest Guard, Medicine Bow Forest Reserve, Wyoming.  
 JOSEPH J. STREBY, LEWIS H. ANDERSON, ROBERT B. WATERMAN, THOMAS W. SLOAN,  
 JAMES B. REED, ALEXANDER H. TYLER, RALPH C. COOK, J. G. STANCHFIELD, Forest  
 Guards, San Gabriel Forest Reserve, California.

GUSTAF HOLT, JOSEPH P. JOHNSON, FORREST L. BALL, THORNTON KINNEY, RICHARD GOLDEN, and ROY E. HOSTETTER, Forest Guards, San Bernardino Forest Reserve, California.

#### **FURLOUGHED.**

W. B. PIPER, Forest Assistant; August 1.

#### **RESTORED FROM FURLOUGH.**

IRA E. SPENCER, Forest Ranger, Mount Rainier Forest Reserve, Washington.

M. L. ERICKSON, Assistant Forest Inspector.

DEXTER B. REYNOLDS, Assistant Forest Ranger, Big Belt Forest Reserve, Montana.

#### **RESIGNED FROM THE SERVICE.**

##### **Reserve Organization—**

W. W. HOOPER, Ranger in Charge, Leadville Forest Reserve, Colorado.

ROY A. GILMORE, Forest Guard, Sierra Forest Reserve (North), California.

HARRY DUNLAP, Forest Guard, Cascade Forest Reserve (North), Oregon.

E. L. SPRINGER, Forest Guard, Sierra Forest Reserve (North), California.

JAMES C. BRODIE, Deputy Forest Ranger, San Francisco Mountains Forest Reserve, Arizona.

HENRY O. BURTON, Assistant Forest Ranger, Yellowstone Forest Reserve (Teton Division), Wyoming.

A. F. ERNO, Assistant Forest Ranger, Klamath Forest Reserve, California.

BERT C. LANNING, Assistant Forest Ranger, Helena Forest Reserve, Montana.

LEWIS J. DEMPSEY, Forest Guard, San Bernardino Forest Reserve, California.

CHARLES H. UNDERWOOD, Assistant Forest Ranger, Gunnison Forest Reserve, California.

ERIC PETERSON, Forest Guard, Minnesota National Forest Reserve, Minnesota.

D. L. VAN METER, Forest Guard, Black Hills Forest Reserve, South Dakota.

JOHN GOFF, Assistant Forest Ranger, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

HARTLEY C. SHEPARD, Forest Guard, Washington Forest Reserve (East), Washington.

JOHN DALEY, Forest Ranger, Mount Graham Forest Reserve, Arizona.

WILLARD K. THOMPSON, Assistant Forest Ranger, San Jacinto Forest Reserve, California.

CHARLES E. RANDLE, Forest Ranger, Mount Rainier Forest Reserve, Washington.

ALPHONSO DOCKWILLER, Forest Ranger, Pecos River Forest Reserve, New Mexico.

GEORGE W. SMITH, Forest Guard, Blue Mountains Forest Reserve (East), Oregon.

J. C. MONTEITH, Forest Guard, Weiser Forest Reserve, Idaho.

E. G. ESTES, Forest Guard, Chiricahua Forest Reserve, Arizona.

EDWARD W. MILLS, Forest Guard, Bitter Root Forest Reserve, Idaho.

##### **Dendrology—**

Mrs. G. W. RAISON, Clerk.

#### **SUSPENDED.**

HENRY BIMERICK, Forest Ranger, Bitter Root Forest Reserve, Idaho.

A. HARVEY JAMIESON, Assistant Forest Ranger, Bitter Root Forest Reserve, Idaho.

FRED J. FERRIS, Deputy Forest Ranger, Olympic Forest Reserve, Washington.

BENSON L. NORTHUP, Assistant Forest Ranger, Olympic Forest Reserve, Washington.



**TRANSFERRED.**

M. SMITH, Jr., Forest Assistant, from Leadville Forest Reserve, Colorado, to Gila Forest Reserve, New Mexico.

J. H. RAMSKILL, Forest Assistant, from Sevier Forest Reserve, Utah, to Leadville Forest Reserve, Colorado.

G. E. CLEMENT, Forest Assistant, from Pikes Peak Forest Reserve, Colorado, to Cassia Forest Reserve, Idaho.

**REDUCED.**

DAN S. MARSHALL, from Forest Supervisor, at \$1,800 per annum, to Deputy Forest Supervisor, at \$1,400 per annum.

**DISMISSED FROM THE SERVICE.**

A. J. TEMPLETON, Forest Ranger, Pikes Peak Forest Reserve, Colorado.

JAMES H. CLARKE, Forest Supervisor, Pikes Peak Forest Reserve, Colorado.

LAWRENCE M. SLOSSON, Deputy Forest Ranger, Santa Barbara Forest Reserve, California.

WILLIAM W. GRAY, Deputy Forest Ranger, Santa Barbara Forest Reserve, California.

STUART A. SLOSSON, Assistant Forest Ranger, Santa Barbara Forest Reserve, California.

# United States Department of Agriculture,

## FOREST SERVICE.

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAMME FOR SEPTEMBER, 1906.

A programme of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are not yet fixed and reference to projects for which plans have not been matured are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this programme complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this programme or is definitely known he should be addressed in care of the Forest Service, Washington, D. C.

#### OFFICE OF THE FORESTER.

GIFFORD PINCHOT, Forester.

OVERTON W. PRICE, Associate Forester.

#### LAW.

GEORGE W. WOODRUFF, in Charge.

Claims, A. C. SHAW.

Trespass, P. P. WELLS.

#### GENERAL INSPECTION.

FREDERICK E. OLMSTED, in Charge, Ketchikan, Alaska.

E. T. ALLEN, *Forest Inspector*, Ashford, Wash.

COERT DuBOIS, *Forest Inspector*, El Paso, Tex.

JOHN H. HATTON, *Forest Inspector*, Santa Barbara, Cal.

ELERS KOCH, *Forest Inspector*, Linley, Mont.

F. A. SILCOX, *Forest Assistant*.

W. W. CLARK, *Assistant Forest Inspector*, Provo, Utah.

F. W. REED, *Assistant Forest Inspector*, Jackson, Wyo.

W. C. HODGE, Jr., *Assistant Forest Inspector*, Washington, D. C.



## FOREST MANAGEMENT.

THOMAS H. SHERRARD, Assistant Forester, in Charge.

Timber Sales, A. K. CHITTENDEN, *Forest Inspector*.

Timber Inspection.	{	E. E. CARTER, <i>Forest Inspector</i> , Portland, Oreg.
		C. S. CHAPMAN, <i>Forest Inspector</i> , Boise, Idaho.
		W. B. GREELEY, <i>Forest Inspector</i> , 180 Perry street, Oakland, Cal.
		P. G. REDINGTON, <i>Forest Inspector</i> , Provo, Utah.
		K. W. WOODWARD, <i>Assistant Forest Inspector</i> , Santa Fe, N. Mex.
		J. S. HOLMES, <i>Assistant Forest Inspector</i> , Flagstaff, Ariz.
Logging Inspection.	{	W. G. WEIGLE, <i>Assistant Forest Inspector</i> , French Gulch, Mont.
		E. S. BRUCE, <i>Expert Lumberman</i> , Missoula, Mont.
		W. E. LA FOUNTAIN, <i>Assistant Forest Inspector</i> , Woodrock, Wyo.
		E. M. HAMILTON, <i>Expert</i> , Deadwood, S. Dak.
		T. J. GARVIN, <i>Expert</i> , Anaconda, Mont.
		A. J. NORTON, <i>Expert</i> , Williams, Ariz.

Cooperation, A. B. PATTERSON, *Assistant Forest Inspector*.

## PROJECTS.

### EXAMINATION OF TIMBER SALES.

#### Arizona—

Santa Catalina Forest Reserve—F. E. AMES, Tucson.

#### California—

Plumas and Diamond Mountain Forest Reserves—W. G. DURBIN, Beckwith.

Shasta Forest Reserve—P. T. HARRIS, H. G. MERRILL, Trinity Center; A. G. SOARES, C. D. PIERCE, and E. J. MCGOVERN, La Moine.

Sierra Forest Reserve—I. F. ELDREDGE, Fresno; assistants, H. G. CALKINS and B. G. GOLDSMITH.

#### Idaho—

Sawtooth and Payette Forest Reserves—S. MOORE, Boise.

Henrys Lake Forest Reserve—Working Plan—J. G. PETERS, Rea; assistants, A. T. BOISEN, C. A. GALARNEAU, and R. G. POND.

#### Montana—

Helena Forest Reserve—E. H. CLAPP, Helena.

Hell Gate Forest Reserve—R. Y. STUART, Missoula.

Yellowstone Forest Reserve, Absaroka Division—J. E. KEACH, Chico.

#### New Mexico—

Jemez Forest Reserve—A. B. RECKNAGEL, Santa Fe.

#### Oregon—

Cascade Forest Reserve (North)—G. M. HOMANS, Custom-house, Portland.

#### South Dakota—

Black Hills Forest Reserve—H. C. NEEL, Deadwood.

#### Wyoming—

Uinta Forest Reserve—L. L. WHITE, Provo.

Yellowstone Forest Reserve—I. T. WORTHLEY, Cody.

### COOPERATIVE.

#### California—

Study of forest conditions in cooperation with the State—A. W. COOPER, Sacramento.

#### Connecticut—

Examination of wood lots and timber tracts—WESLEY BRADFELD, Waterbury.

**Maine—**

Forest conditions—AUSTIN CARY, Brunswick.

**Missouri—**

Study of forest conditions in cooperation with the Missouri Experiment Station—S. J. RECORD, Grandin; assistants, F. M. PATTON and J. F. PRESTON, Ellington.

**New Hampshire—**

Preparation of spruce volume tables—B. MACKAYE, Bolton Landing, N. Y.; E. S. WOODRUFF and L. S. MURPHY, Woodstock.

**Wisconsin—**

Working plans for timber sales on Indian reservations in cooperation with the State—E. M. GRIFFITH, State Forester, Madison; assistant, J. A. HOWARTH, Reserve.

**DENDROLOGY.**

GEO. B. SUDWORTH, Assistant Forester, in Charge.

**PROJECTS.****California—**

Study of tanbark trees of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley.

Special studies of little-known California trees—four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY, Leland Stanford University.

**Florida—**

Study of improved methods of turpentineing, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs.

**Maryland—**

Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

**North Carolina—**

Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON (directed by Dr. CHAS. H. HERTY, Professor of Chemistry), Chapel Hill.

**Texas—**

Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin.

**FOREST EXTENSION.**

R. C. BRYANT, Acting in Charge.

Inspection. { G. W. PEAVY, *in Charge, Pasadena, Cal.*  
S. N. SPRING, *Cooperative Inspection, Leadville, Colo.*  
G. B. LULL, *Sacramento, Cal.*

Cooperative Planting, R. C. BRYANT.

Reserve Planting, L. C. MILLER, Tucson, Ariz.

**PROJECTS.****Administrative Inspection—**

Nursery and planting stations on forest reserves—E. A. STERLING, Washington, D. C.

**Arizona—**

Investigation of city watersheds and establishment of rangers' nurseries, Pinal Mountains, Santa Rita, and Chiricahua forest reserves—L. C. MILLER, Tucson.

**California—**

Study of planted timber in cooperation with the State—S. J. FLINTHAM, Hotel Hollenbeck, Los Angeles.

Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena; assistant, B. R. H. D'ALLEMAND, Santa Barbara.



Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena; assistants, S. Y. PARNAY, H. C. MUZZALL, and WILBUR ANDERSON.

**Colorado—**

Nursery and planting work, Pikes Peak Forest Reserve—S. B. DETWILER, Colorado City; assistant, J. F. KÜMMEL.

Investigation of city watersheds and establishment of rangers' nurseries on forest reserves—S. N. SPRING, Leadville; assistant, W. H. VON BAYER.

**Hawaii—**

Cooperative experimental planting—R. S. HOSMER, Honolulu.

**Idaho—**

Establishment of forest nursery, Bear River Forest Reserve—A. E. OMAN, Weston.

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. D. GUTHRIE, Boise.

**Montana—**

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. F. BOND, Helena.

**Nebraska—**

Preparation of report on tree planting on irrigated lands in the South Platte valley—F. G. MILLER, Lincoln.

Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey; assistants, W. H. MAST, E. B. FROTHINGHAM, and LA MORE BESLEY.

**Nevada—**

Study for tree planting in the Truckee-Carson irrigation project—E. O. SIECKE, Hazen.

**New Mexico—**

Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard; assistant, W. B. HADLEY.

Establishment of rangers' nurseries, Gila Forest Reserve—W. R. MATTOON, Fort Bayard.

Investigation of city watersheds and establishment of rangers' nurseries, Pecos River Forest Reserve—H. P. BAKER, Cowles; assistant, F. J. PHILIPS.

**Utah—**

Nursery work on the Salt Lake Forest Reserve—EDWARD C. CLIFFORD, Silver Lake.

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. M. FETHEROLF, Silver Lake.

## FOREST PRODUCTS.

R. S. KELLOGG, Acting in Charge.

Inspection, HENRY GRINNELL.

Forest Measurements, JOHN FOLEY.

Wood Preservation, W. F. SHERFESEE, *Acting*.

Wood Chemistry, A. L. DEAN.

Wood Utilization, R. S. KELLOGG.

Reserve Engineering, ————.

## PROJECTS.

**California—**

Tests of the strength of eucalyptus wood, in cooperation with the University of California—L. E. HUNT, Berkeley; assistant, A. L. HEIM.

Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in Southern California—W. R. WHEATON, Hotel Lillie, Los Angeles; assistant, O. T. SWAN.

**Colorado—**

Administrative inspection—W. L. HALL, Vendome Hotel, Leadville.

Study of the uses of dead and mature timber on forest reserves—E. R. HODSON, Glenwood Springs, H. S. SACKETT, Gunnison.

**Connecticut—**

Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven; assistants, O. P. M. GOSS and CORNELIUS BARRY.

Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven; assistants, ERNEST BATEMAN and D. C. PARMELEE.

**Indiana—**

Timber testing at Lafayette, in cooperation with Purdue University—W. K. HATT, Lafayette; assistants, H. S. BETTS and J. A. NEWLIN.

**Maryland—**

Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton.

**Massachusetts—**

Studies of the value of various woods for pulp—A. D. LITTLE, 93 Broad street, Boston, and H. S. BRISTOL, 696 East First street, South Boston.

**Michigan—**

Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and the Winconsin Central railway companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba; assistant, C. E. FEAGIN.

**Oregon—**

Tests of the strength of red fir, in cooperation with the University of Oregon—J. B. KNAPP and M. CLINE, Eugene.

**Pennsylvania—**

Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, Jr., care Philadelphia and Reading Coal and Iron Company, Pottsville; assistant, C. J. HUMPHREY.

**Utah—**

Study of the uses of dead and mature timber on forest reserves—J. D. WARNER, Provo.

**Virginia—**

Experiments in grading, seasoning, and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—M. C. JENSEN, Norfolk.

**Washington—**

Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle.

Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma; assistant, W. H. KEMPFER.

**Wyoming—**

Study of the uses of dead and mature timber on forest reserves—FREDERICK DUNLAP, Saratoga.

**General Studies—**

Collection of statistics of forest products for year 1905—H. M. HALE, Washington, D. C.; GEORGE K. SMITH, Victoria Building, St. Louis, Mo.



- Study of lumber prices—A. H. PIERSON, Washington, D. C.  
 Study of commercial processes of wood distillation—W. C. GEER, Washington, D. C.  
 Study of paving woods—C. L. HILL, Washington, D. C.  
 Study of woods used in the vehicle industry—H. B. HOLROYD, Washington, D. C.  
 Study of preservative treatment of piling—C. S. SMITH, Washington, D. C.  
 Study of treating-plant construction and methods—C. G. CRAWFORD, Washington, D. C.

### **PUBLICATION AND EDUCATION.**

**HERBERT A. SMITH, Editor, in Charge.**

**Silvics, RAPHAEL ZON.**

**Review, FINDLEY BURNS.**

**Information, TREADWELL CLEVELAND, Jr.**

**Education, HERBERT A. SMITH.**

**Printing, QUINCY R. CRAFT.**

### **PUBLICATIONS IN AUGUST.**

- Bulletin 69.—Sugar Pine and Western Yellow Pine in California, by A. W. Cooper.  
 Circular 36 (Second Edition).—The Forest Service: What It Is, and How It Deals with Forest Problems.  
 Circular 39.—Experiments on the Strength of Treated Timbers, by W. Kendrick Hatt.  
 Circular 40.—The Utilization of Tupelo, by H. B. Holroyd.  
 Forest-Planting Leaflet 18.—Chestnut.  
 Forest-Planting Leaflet 19.—Western Yellow Pine.  
 Forest-Planting Leaflet 20.—Red Cedar.  
 Yearbook Extract 406.—Progress of Forestry in 1905.  
 Trade Bulletin 3.—Kiln Drying Red Gum Heading Boards.  
 Trade Bulletin 4.—Wood Used for Veneer Stock in 1905.

### **PROJECTS.**

#### **Kansas—**

Educational addresses—HERBERT A. SMITH.

#### **Northern Reserve District—**

Reconnaissance of typical forest reserves—HERBERT A. SMITH.

Location of permanent sample plots on reserves—ALFRED GASKILL.

Silvicultural studies on reserves—RAPHAEL ZON.

#### **New Hampshire—**

Location of permanent sample plots—GEORGE HEWITT MYERS and W. D. STERRETT, Waterville; assistants, R. WEITKNECHT and W. D. CLARK.

### **RECORD.**

**JAMES B. ADAMS, Special Fiscal Agent, in Charge.**

**Maintenance, GEO. G. ANDERSON.**

**Accounts, GEO. E. KING.**

**Purchase, HARRY C. TOWERS.**

### **GRAZING.**

**A. F. POTTER, Inspector of Grazing, in Charge.**

**Inspection, { C. H. ADAMS, Helena, Mont.  
                   { W. C. CLOS, Provo, Utah.**

## RESERVE ORGANIZATION.

R. E. BENEDICT, Forest Inspector, in Charge.

Reserve Districts { Northern District, W. T. Cox.  
Western District, T. S. WOOLSEY, Jr.  
Southern District, SMITH RILEY.

Reserve Boundaries, W. H. B. KENT.

Compilation, H. J. TOMPKINS.

## PROJECTS.

EXAMINATION FOR NEW RESERVES AND BOUNDARY CHANGES.

### Arizona—

H. O. STABLER, Clifton.

### California—

R. W. AYRES, care of R. H. Charlton, Los Angeles.

### Colorado—

STANTON G. SMITH, Durango.

### Hawaii—

R. S. HOSMER, Honolulu.

### Idaho—

CLYDE LEAVITT, Priest River (under act of June 11, 1906).

### Montana—

R. V. R. REYNOLDS, Kalispell, and R. B. WILSON, Livingston.

### Oregon—

L. VON WERNSTED, The Dalles.

## EXECUTIVE AND PROTECTIVE FORCE ON RESERVES.

### ALASKA.

Alexander Archipelago and Afognak forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan.

### ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise; H. D. BURRALL, Forest Assistant, Paradise.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff; PATRICK A. FENTON, Forest Ranger, Grand Canyon.

Mount Graham Forest Reserve—J. W. FARMER, Forest Ranger in Charge, Safford.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Ranger in Charge, Globe.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.



Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.

Tonto Forest Reserve—W. H. REED, Forest Ranger in Charge, Roosevelt.

#### CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka; C. J. BUCK, Forest Assistant, Yreka.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy; JOSEPH C. LA PLANT, Forest Ranger, Burney.

Modoc Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

San Bernardino Forest Reserve—R. H. CHARLTON, Acting Forest Supervisor, Los Angeles; NELS O. TORSTENSON, Forest Ranger, San Bernardino.

San Gabriel Forest Reserve—R. H. CHARLTON, Acting Forest Supervisor, Los Angeles; B. H. CROW, Forest Ranger, Pasadena.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara; J. REBMANN, Forest Assistant, Santa Barbara; STEPHEN H. DOUGLASS, Forest Ranger, Ventura.

Shasta Forest Reserve—G. A. COLEMAN, Forest Supervisor, Sisson; F. H. HAFLEY, Deputy Forest Supervisor, Sisson; R. C. HACKLEY, Forest Assistant, Sisson.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork; H. J. BROWN, Forest Assistant, Northfork; ERNEST BRITTEN, Forest Ranger, Three Rivers.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Supervisor, Sonora.

Tahoe Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City; M. B. PRATT, Forest Assistant, Nevada City; JNO. C. WELLS, Forest Ranger, Nevada City.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaverville; C. J. BUCK, Forest Assistant, Yreka.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

Yuba Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City; M. B. PRATT, Forest Assistant, Nevada City.

#### COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt.

Fruita Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison.

Holy Cross Forest Reserve—SHEP N. HUSTED, Forest Ranger in Charge, Glenwood Springs; F. H. MORRILL, Forest Assistant, Glenwood Springs.

Leadville Forest Reserve—JAMES A. BLAIR, Forest Ranger in Charge, Leadville; J. H. RAMSKILL, Forest Assistant, Leadville.

Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga, Wyo.; JAMES BLACKHALL, Forest Ranger, Saratoga, Wyo.; C. G. SMITH, Forest Assistant, Saratoga, Wyo.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling.

Pikes Peak Forest Reserve—FRANK R. SHERWIN, Forest Ranger in Charge, Denver; F. D. WHITNEY, Forest Ranger, Denver; T. D. WOODBURY, Forest Assistant, Denver.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Monte Vista; W. J. MORRILL, Forest Assistant, Monte Vista.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker.

#### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia; J. E. BARTON, Forest Assistant, Kooskia.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello; G. E. CLEMENT, Forest Assistant, Pocatello.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony; J. F. BRUNS, Forest Assistant, St. Anthony.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise; C. E. DUNSTON, Forest Assistant, Boise.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello; G. E. CLEMENT, Forest Assistant, Pocatello.

Priest River Forest Reserve—B. F. MCCONNELL, Forest Supervisor, Williams; R. L. FROMME, Forest Assistant, Williams.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise; C. E. DUNSTON, Forest Assistant, Boise.

Weiser Forest Reserve—JOHN B. LAFFERTY, Forest Supervisor, Weiser.

#### KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

#### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Forest Ranger in Charge, Cass Lake.

#### MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend, M. K. STICKNEY, Forest Assistant, Helena.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula; W. W. WHITE, Forest Assistant, Missoula.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend; M. K. STICKNEY, Forest Assistant, Helena.

Helena Forest Reserve—DWIGHT BUSHNELL, Forest Supervisor, Helena; M. K. STICKNEY, Forest Assistant, Helena.

Gallatin Forest Reserve—DAVID CONKLING, Forest Supervisor, Bozeman; DORR SKEELS, Forest Assistant, Bozeman.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula; W. W. WHITE, Forest Assistant, Missoula.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.



Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Linley; BERT P. KIRKLAND, Forest Assistant.

#### NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

North Platte Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

#### NEW MEXICO.

Gila Forest Reserve—R. C. MCCLURE, Forest Supervisor, Silver City; A. O. WAHA, Forest Assistant, Silver City; M. SMITH, Forest Assistant, Silver City.

Jemez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Lincoln Forest Reserve—JOHN KERR, Forest Supervisor, Capitan.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales.

#### OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache.

#### OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg; R. F. HAMMATT, Forest Assistant, Roseburg.

Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville; HENRY IRELAND, Deputy Forest Ranger, Prineville.

Blue Mountains Forest Reserve (Eastern Division)—S. S. TERRELL, Forest Supervisor, Sumpter.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland; MILTON J. ANDERSON, Forest Ranger, The Dalles.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg; R. F. HAMMATT, Forest Assistant, Roseburg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla, Wash.; H. D. FOSTER, Forest Assistant, Walla Walla, Wash.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood; R. P. IMES, Assistant Forest Inspector, Deadwood.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante.

Bear River Forest Reserve (Logan Division)—J. F. SQUIRES, Forest Supervisor, Logan.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.  
 Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George.  
 Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont.  
 Fillmore Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.  
 Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville.  
 La Sal Forest Reserve—ORRIN C. SNOW, Forest Ranger in Charge, Castleton.  
 Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim.  
 Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson.  
 Salt Lake Forest Reserve—E. H. CLARKE, Forest Supervisor, Murray.  
 Sevier Forest Reserve—TIMOTHY C. HOYT, Forest Ranger in Charge, Parowan.  
 Uinta Forest Reserve—WILLARD I. PACK, Forest Supervisor, Provo; H. F. STUDLEY, Forest Assistant, Provo.  
 Wasatch Forest Reserve—E. H. CLARKE, Jr., Forest Supervisor, Murray.

## WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting; C. H. FLORY, Forest Assistant, Orting; CHAS. E. RANDLE, Forest Ranger, Fairfax.  
 Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspport.  
 Wenaha Forest Reserve—J. M. SCHMITZ, Forest Ranger in Charge, Walla Walla; H. D. FOSTER, Forest Assistant, Walla Walla.  
 Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas; W. M. DRAKE, Forest Assistant, Sumas.  
 Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan.

## WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Big Horn; P. T. COOLIDGE, Forest Assistant, Big Horn.  
 Medicine Bow Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga; JAMES BLACKHALL, Forest Ranger, Saratoga; C. G. SMITH, Forest Assistant, Saratoga.  
 Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale; G. H. CECIL, Forest Assistant, Wapiti.  
 Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson; CLARENCE N. WOODS, Forest Ranger, Jackson.  
 Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti; HARRY THURSTON, Forest Ranger, Marquette; G. H. CECIL, Forest Assistant, Wapiti.

## SERVICE CHANGES IN AUGUST.

## APPOINTMENTS.

## Forest Products—

Miss SELMA A. HADDEN, Clerk, at \$300 per annum.

## Record—

Miss CLARA RUTH, Clerk, at \$600 per annum.

E. L. McFATE, Clerk, at \$600 per annum.

Miss LENA BRYAN, Clerk, at \$600 per annum.

E. F. PARKINSON, Clerk, at \$480 per annum.

H. J. LOVING, Clerk, at \$1,000 per annum.

MARK SMITH, Clerk, at \$1,200 per annum.

## Reserve Organization—

The following persons were appointed Assistant Forest Rangers, at \$900 per annum, upon certification by the Civil Service Commission:

HERMEN TUDOR, Yellowstone Forest Reserve (Absaroka Division), Mont.

GILBERT D. BROWN, Cascade Forest Reserve (North) Oreg.



The following persons were appointed Forest Guards, at \$720 per annum:

NEWTON G. BELLAIRA, Medicine Bow Forest Reserve, Colo.  
 HUGH BARNES, HYRUM PARSONS, and WILLIAM J. BARR, Yellowstone Forest Reserve.  
 THOMAS LEE, Lewis and Clark Forest Reserve (South), Mont.  
 ERNEST C. BUNKER and EDWARD CAVANAUGH, Leadville Forest Reserve, Colo.  
 JAMES H. CHIDESTER and JAMES STEELE, Sevier Forest Reserve, Utah.  
 JOHN R. BARBER, Pinal Mountains Forest Reserve, Ariz.  
 C. E. SMITH, Cascade Forest Reserve (North), Oreg.  
 WILLIAM A. DAHLQUIST, Pocatello Forest Reserve, Idaho.  
 DAVID S. BROCK, Shasta Forest Reserve, Cal.  
 JAMES E. JEWELL, Weiser Forest Reserve, Idaho.  
 ALFRED C. MEEK, Lincoln Forest Reserve, N. Mex.  
 WALTER S. BARTON, Yuba Forest Reserve, Cal.  
 ALBERT H. FOSTER, Sierra Forest Reserve (North), Cal.  
 HUGH S. DEPLER and BENJ. F. SHELEDY, Battlement Mesa Forest Reserve, Colo.  
 W. B. BLETCHER and THOMAS CORNWELL, Jemez Forest Reserve, N. Mex.  
 WALTER F. EMERICK and DWIGHT MURPHY, Santa Barbara Forest Reserve, Cal.  
 SAMUEL M. COLMAN and EARL SALISBURY, Park Range Forest Reserve, Colo.  
 GROVER T. H. LADD, Trinity Forest Reserve, Cal.  
 CHARLES A. HAFFLEY, San Francisco Mountains Forest Reserve, Ariz.  
 FREDERICK SIEWKE, Big Horn Forest Reserve, Wyo.

#### PROMOTIONS.

##### Reserve Organization—

The following promotions in the reserve force were made for efficiency and in view of increased living expenses by reason of assignment:

WARREN M. COOPER, from Forest Ranger at \$720 per annum, to Assistant Forest Ranger at \$900 per annum, Cascade Forest Reserve (North), Oregon.

HENRY WALDREF, from Forest Ranger at \$720 per annum, to Assistant Forest Ranger at \$900 per annum, Lewis and Clark Forest Reserve (South), Montana.

WILLIAM W. CRYDER, Jr., from Forest Ranger at \$900 per annum, to Deputy Forest Ranger at \$1,080 per annum, Mount Rainier Forest Reserve, Washington.

HAROLD J. SAUNDERS, from Assistant Forest Ranger at \$900 per annum, to Deputy Forest Ranger at \$1,080 per annum, Mount Rainier Forest Reserve, Washington.

ALBERT H. WILLIAMS, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Holy Cross Forest Reserve, Colo.

JOHN McLAREN, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Holy Cross Forest Reserve, Colo.

S. S. TERRELL, from Forest Supervisor at \$900 to Forest Supervisor at \$1,200 per annum, Blue Mountains Forest Reserve, (East) Oreg.

C. A. MACK, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Leadville Forest Reserve, Colo.

CHARLES E. WILLIAMS, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Leadville Forest Reserve, Colo.

FRANK A. BLAIR, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Leadville Forest Reserve, Colo.

RODERICK G. McDONALD, from Deputy Forest Ranger at \$1,000 per annum to Deputy Forest Ranger at \$1,100 per annum, Bighorn Forest Reserve, Wyo.

A. E. HINDERER, from Deputy Forest Ranger at \$1,000 per annum to Forest Ranger at \$1,200 per annum, Prescott Forest Reserve, Ariz.

ORRIN C. SNOW, from Ranger in Charge at \$900 per annum to Ranger in Charge at \$1,200 per annum, La Sal Forest Reserve, Utah.

The following promotions in the clerical force were made for efficiency and to fill vacancies on the statutory roll:

**Forest products—**

L. J. ROBINSON, from \$480 per annum to \$600 per annum.

**Record—**

Miss F. D. STRAUSE, from \$1,100 per annum to \$1,200 per annum.

Mrs. E. S. DE PUTRON, from \$600 per annum to \$700 per annum.

Miss NANNIE WARDER, from \$480 per annum to \$600 per annum.

**SEPARATED.**

OLAF MOSSBERG, Forest Ranger, Bighorn Forest Reserve, Wyo.

ALBERT Z. STILLMAN, Assistant Forest Ranger, Elkhorn Forest Reserve, Mont.

HENRY H. HOTCHKISS, Forest Expert, Gila River Forest Reserve, N. Mex.

**FURLOUGHED.**

ALBERT ABBOTT, Forest Guard, Jemez Forest Reserve, N. Mex.

W. F. BOWERS, Assistant Forest Ranger, Cochetopa Forest Reserve, Colo.

**RESTORED FROM FURLOUGH.**

R. C. HACKLEY, Forest Assistant, Shasta Forest Reserve, Cal.

JAMES STUART, Assistant Forest Ranger, Bitter Root Forest Reserve, Idaho.

**RESIGNED FROM THE SERVICE.**

Owing to a mistake in the transmission of a telegram the names of the following rangers were printed in the Programme for August under the head of "Dismissed from the Service." They should have appeared under "Resigned from the Service," and are here reprinted accordingly:

LAWRENCE M. SLOSSON, Deputy Forest Ranger, Santa Barbara Forest Reserve, California.

WILLIAM W. GRAY, Deputy Forest Ranger, Santa Barbara Forest Reserve, California.

STUART A. SLOSSON, Assistant Forest Ranger, Santa Barbara Forest Reserve, California.

**Products—**

E. H. STÜCK, Draftsman.

D. C. BOLLARD, Draftsman.

T. M. LONGHAM.

**Record—**

E. A. BENNETT, Clerk.

L. HAUSEN, Clerk.

**Reserve Organization—**

PAUL T. BEAN, Assistant Forest Ranger, Madison Forest Reserve, Mont.

LUTHER W. SUTTON, Forest Guard, and RUFUS K. WADE, Forest Ranger, Gila River Forest Reserve, N. Mex.

J. H. JORDAN, Deputy Forest Ranger, Yellowstone Forest Reserve (Shoshone Division), Wyo.

GEORGE A. PETERS, Forest Ranger, Lincoln Forest Reserve, N. Mex.



B. L. NORTHRUP, Assistant Forest Ranger, Olympic Forest Reserve, Wash.

HARRY W. CHAMBERS, Assistant Forest Ranger, Big Belt Forest Reserve, Mont.

JAMES B. PHIPPS, Forest Guard, Prescott Forest Reserve, Ariz.

J. B. RUSK, Forest Guard, Jemez Forest Reserve, N. Mex.

FRANK A. DONEY, Forest Guard, Lewis & Clark Forest Reserve (South), Mont.

JAMES J. STOKES, Forest Guard, Washington Forest Reserve (East), Wash.

IRVING SMITH, Forest Guard, Battlement Mesa Forest Reserve, Colo.

W. T. CARR, Weiser Forest Reserve, Idaho.

J. HARRY WRIGHT, Assistant Forest Ranger, Yellowstone Forest Reserve (Absaroka Division), Mont.

JOHN S. REID, Assistant Forest Ranger, Trinity Forest Reserve, Cal.

SHELDON CHENEY, Forest Guard, Sierra Forest Reserve (North), Cal.

BIRTSALL W. JONES, Assistant Forest Ranger, Santa Catalina Forest Reserve, Ariz.

LUCIEN W. THORPE, Assistant Forest Ranger, Big Belt Forest Reserve, Mont.

WAYNE S. BRADLEY, Forest Guard, Sawtooth Forest Reserve, Idaho.

#### **SUSPENDED.**

JOHN LEWIS, Forest Ranger, San Francisco Mountain Forest Reserve, Ariz.

ALBERT B. BRYANT, Forest Guard, Gila Reserve, N. Mex.

#### **REDUCED.**

FRANK KURTZ, from Forest Ranger at \$1,000 per annum to Assistant Forest Ranger at \$900 per annum, Bighorn Forest Reserve, Wyo.

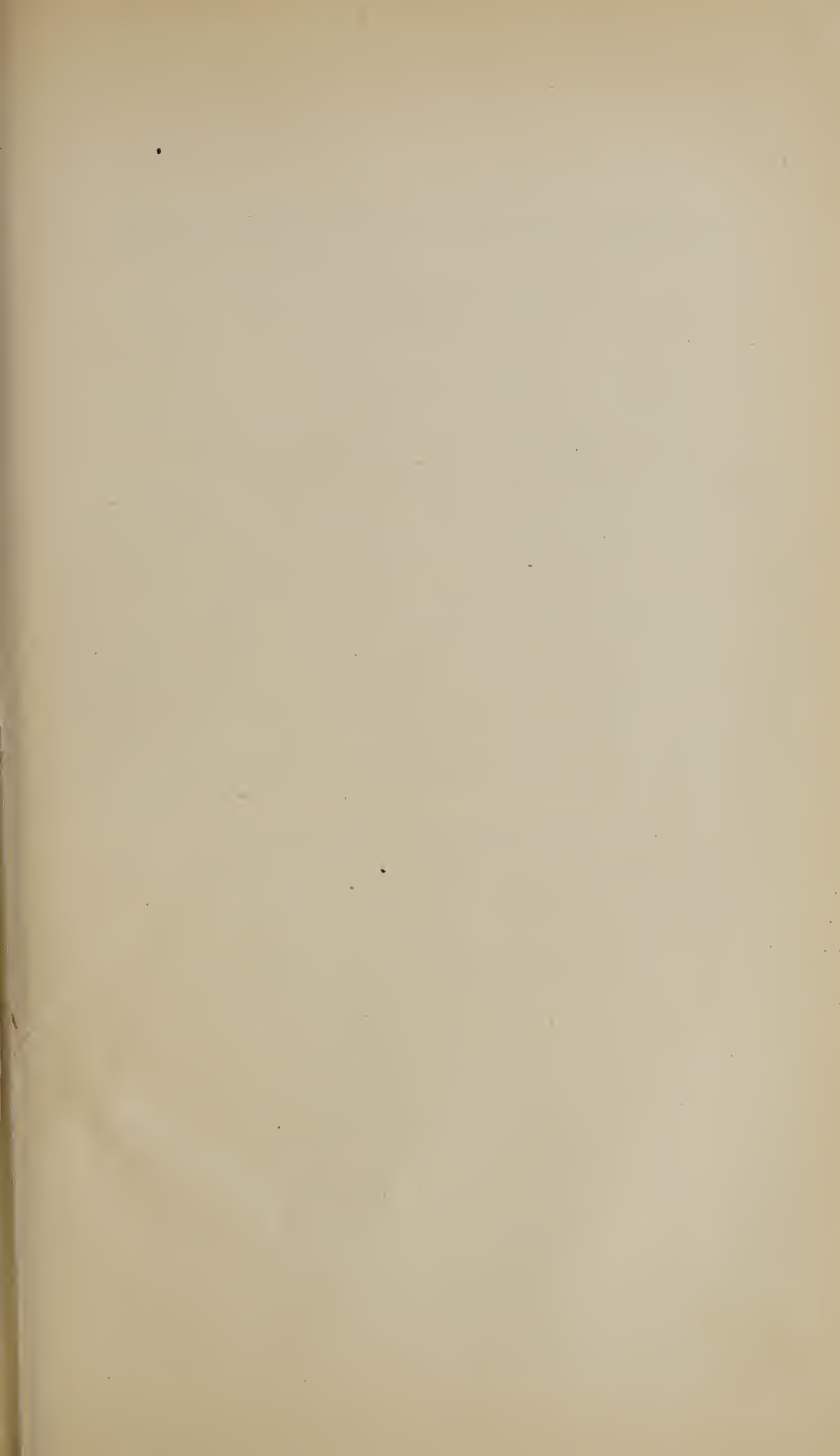
#### **DISMISSED FROM THE SERVICE.**

HENRY BIMERICK, Forest Ranger, Bitterroot Forest Reserve, Idaho.

A. HARVEY JAMIESON, Assistant Forest Ranger, Bitterroot Forest Reserve, Idaho.

ROBERT L. TAYLOR, Assistant Forest Ranger, Cascade Forest Reserve (South), Oreg.

JAMES TAYLOR, Forest Guard, Medicine Bow Forest Reserve, Colo.







# United States Department of Agriculture,

## FOREST SERVICE.

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAM FOR OCTOBER, 1906.

A program of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are not yet fixed, and reference to projects for which plans have not been matured, are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this program complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this program or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

#### OFFICE OF THE FORESTER.

GIFFORD PINCHOT, Forester.

OVERTON W. PRICE, Associate Forester.

#### LAW.

GEORGE W. WOODRUFF, in Charge.

Claims, A. C. SHAW.

Trespass, P. P. WELLS.

Privileges, M. J. McVEAN.

#### GENERAL INSPECTION.

FREDERICK E. OLMSTED, in Charge, Portland, Oreg.

E. T. ALLEN, *Forest Inspector*, Tacoma, Wash.

COERT DU BOIS, *Forest Inspector*, El Paso, Tex.

SMITH RILEY, *Forest Inspector*, Washington, D. C.

ELERS KOCH, *Forest Inspector*, Bozeman, Mont.

W. W. CLARK, *Forest Inspector*, Fremont, Utah.

F. W. REED, *Forest Inspector*, Jackson, Wyo.

M. L. ERICKSON, *Assistant Forest Inspector*, Wallowa, Oreg.

F. A. SILCOX, *Assistant Forest Inspector*, Washington, D. C.

W. C. HODGE, Jr., *Assistant Forest Inspector*, Washington, D. C.



## FOREST MANAGEMENT.

THOMAS H. SHERRARD, Assistant Forester, in Charge.

**Timber Sales,** A. K. CHITTENDEN, *Forest Inspector.*

<b>Timber Inspection.</b>	{	E. E. CARTER, <i>Forest Inspector</i> , Custom House, Portland, Oreg.
		C. S. CHAPMAN, <i>Forest Inspector</i> , Boise, Idaho.
		W. B. GREELEY, <i>Forest Inspector</i> , 180 Perry street, Oakland, Cal.
		P. G. REDINGTON, <i>Forest Inspector</i> , Kremmling, Colo.
		K. W. WOODWARD, <i>Assistant Forest Inspector</i> , Santa Fe, N. Mex.
<b>Logging Inspection.</b>	{	J. S. HOLMES, <i>Assistant Forest Inspector</i> , Flagstaff, Ariz.
		W. G. WEIGLE, <i>Assistant Forest Inspector</i> , French Gulch, Mont.
		E. S. BRUCE, <i>Expert Lumberman</i> , Washington, D. C.
		W. E. LA FOUNTAIN, <i>Assistant Forest Inspector</i> , Woodrock, Wyo.
		E. M. HAMILTON, <i>Assistant Lumberman</i> , Deadwood, S. Dak.
		T. J. GARVIN, <i>Assistant Lumberman</i> , Anaconda, Mont.
		A. J. NORTON, <i>Assistant Lumberman</i> , Williams, Ariz.

**Cooperation,** —————

## PROJECTS.

### EXAMINATION OF TIMBER SALES.

#### Arizona—

Santa Catalina Forest Reserve—F. E. AMES, Tucson.

#### California—

Plumas and Diamond Mountain Forest Reserves—W. G. DURBIN, Beckwith.

Shasta Forest Reserve—P. T. HARRIS; assistants, H. G. MERRILL, L. BRADLEY, R. A. HALLORAN, R. W. WALKER, Trinity Center; A. G. SOARES, C. D. PIERCE, and E. J. MCGOVERN, La Moine.

Sierra Forest Reserve—I. F. ELDREDGE, Northfork; assistants, H. G. CALKINS and B. G. GOLDSMITH.

#### Idaho—

Sawtooth and Payette Forest Reserves—S. L. MOORE, Boise.

Henrys Lake Forest Reserve—Working Plan—J. G. PETERS, Rea; assistants, A. T. BOISEN, C. A. GALARNEAU, and R. G. POND.

#### Montana—

Hell Gate Forest Reserve—E. H. CLAPP, Missoula; R. Y. STUART, French Gulch.

Yellowstone Forest Reserve, Absaroka Division—J. E. KEACH, Chico.

#### New Mexico—

Jemez Forest Reserve—A. B. RECKNAGEL, Santa Fe.

#### Oregon—

Cascade Forest Reserve (North)—G. M. HOMANS, Custom House, Portland; Assistant, W. O. DAVIS.

#### South Dakota—

Black Hills Forest Reserve—H. C. NEEL, Deadwood.

#### Wyoming—

Uinta Forest Reserve—L. L. WHITE, Pinedale.

Yellowstone Forest Reserve—I. T. WORTHLEY, Cody.

### COOPERATIVE.

#### California—

Study of forest conditions in cooperation with the State—A. W. COOPER, Sacramento.

#### Maine—

Forest conditions—AUSTIN CARY, Brunswick.

**New Hampshire—**

Timber tract examinations—A. B. PATTERSON, Concord.

**Rhode Island—**

Examination of woodlots and timber tracts—WESLEY BRADFELD, Providence.

**Wisconsin—**

Working plans for timber sales on Indian reservations in cooperation with the State—E. M. GRIFFITH, State Forester, Madison; assistant, J. A. HOWARTH, Reserve.

**DENDROLOGY.**

GEO. B. SUDWORTH, Assistant Forester, in Charge.

**PROJECTS.****California—**

Study of tanbark trees of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley.

Special studies of little-known California trees—four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY, Leland Stanford University.

**Florida—**

Study of improved methods of turpentineing, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs.

**Maryland—**

Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

**North Carolina—**

Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON (directed by Dr. CHAS. H. HERTY, Professor of Chemistry), Chapel Hill.

**Texas—**

Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin.

**FOREST EXTENSION.**

ERNEST A. STERLING, Assistant Forester, in Charge.

Inspection, { G. W. PEAVY, *in Charge*, Pasadena, Cal.  
S. N. SPRING, *Cooperative Inspection*, Salt Lake City, Utah.  
G. B. LULL, Sacramento, Cal.

Cooperative Planting, R. C. BRYANT.

Reserve Planting, L. C. MILLER.

**PROJECTS.****Administrative Inspection—**

Nursery and planting stations on forest reserves—E. A. STERLING, Washington, D. C.

**California—**

Study of planted timber in cooperation with the State—S. J. FLINTHAM, Sacramento.

Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena; assistant, B. R. H. D'ALLEMAND, Santa Barbara.

Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena; assistants, S. Y. PARNAY, H. C. MUZZALL, and WILBUR ANDERSON.

**Colorado—**

Nursery and planting work, Pikes Peak Forest Reserve—S. B. DETWILER, Colorado City; assistant, J. F. KÜMMEL.

Investigation of city watersheds and establishment of rangers' nurseries on forest reserves—W. H. VON BAYER, Glenwood Springs.



**Hawaii—**

Cooperative experimental planting—R. S. Hosmer, Honolulu.

**Idaho—**

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. D. Guthrie, Pocatello.

**Minnesota—**

Collection of forest-tree seeds for nursery and planting stations—W. H. Mast, Halsey, Nebr.

**Montana—**

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. F. Bond, Helena.

**Nebraska—**

Nursery and planting work, Dismal River Forest Reserve—C. A. Scott, Halsey; assistants, W. H. Mast, E. B. Frothingham, and La More Besley.

**New Mexico—**

Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. Mattoon, Fort Bayard; assistant, W. B. Hadley.

Establishment of rangers' nurseries, Gila Forest Reserve—W. R. Mattoon, Fort Bayard.

Investigation of city watersheds and establishment of rangers' nurseries, Jemez Forest Reserve—F. J. Philips, Tres Piedros.

**Pennsylvania—**

Preliminary examination for planting plan on lands of Lehigh Coal and Navigation Company—A. S. Peck, Washington, D. C.

**Utah—**

Nursery work on the Salt Lake Forest Reserve—Edward C. Clifford, Silver Lake.

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. M. Fetherolf, Silver Lake.

Investigation of city watersheds and establishment of rangers' nurseries, Sevier Forest Reserve—S. N. Spring, Salt Lake City.

## FOREST PRODUCTS.

WM. L. HALL, Assistant Forester, in Charge.

Inspection { HENRY GRINNELL.  
                  { M. CLINE.

Forest Measurements, JOHN FOLEY.

Wood Preservation, CARL G. CRAWFORD.

Wood Chemistry, A. L. DEAN.

Wood Utilization, R. S. KELLOGG.

Reserve Engineering, ———— ————.

## PROJECTS.

**California—**

Tests of the strength of eucalyptus wood, in cooperation with the University of California—L. E. Hunt, Berkeley; assistant, A. L. Heim.

Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in Southern California—W. R. Wheaton, Hotel Lillie, Los Angeles; assistant, O. T. Swan.

**Colorado—**

Study of the uses of dead and mature timber on forest reserves—E. R. Hodson, Glenwood Springs; H. S. Sackett, Collbran.

**Connecticut—**

Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven; assistants, O. P. M. GOSS and CORNELIUS BARRY.

Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven; assistants, ERNEST BATEMAN and D. C. PARMELEE.

**Indiana—**

Timber testing at Lafayette, in cooperation with Purdue University—W. K. HATT, Lafayette; assistants, H. S. BETTS and J. A. NEWLIN.

**Maryland—**

Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—H. F. WEISS, Parkton.

**Massachusetts—**

Studies of the value of various woods for pulp—A. D. LITTLE, 93 Broad street, Boston, and H. S. BRISTOL, 696 East First street, South Boston.

**Michigan—**

Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and the Wisconsin Central Railway companies, and experiments in seasoning cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—H. A. PAUL, New Ludington Hotel, Escanaba; assistant, C. E. FEAGIN.

**Oregon—**

Tests of the strength of red fir, in cooperation with the University of Oregon—J. B. KNAPP, Eugene.

**Pennsylvania—**

Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, Jr., care Philadelphia and Reading Coal and Iron Company, Pottsville; assistant, C. J. HUMPHREY.

**Utah—**

Study of the uses of dead and mature timber on forest reserves—J. D. WARNER, Provo.

**Virginia—**

Experiments in grading, seasoning, and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—M. C. JENSEN, Norfolk.

**Washington—**

Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle.

Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma; assistant, W. H. KEMPFER.

**Wyoming—**

Study of the uses of dead and mature timber on forest reserves—FREDERICK DUNLAP, Saratoga.

**General Studies—**

Collection of statistics of forest products for year 1906—H. M. HALE, Washington, D. C.; GEORGE K. SMITH, Victoria Building, St. Louis, Mo.

Study of lumber prices—A. H. PIERSON, Washington, D. C.

Study of commercial processes of wood distillation—W. C. GEER, Washington, D. C.

Study of paving woods—C. L. HILL, Washington, D. C.

Study of woods used in the vehicle industry—H. B. HOLROYD, Washington, D. C.

Study of preservative treatment of piling—C. S. SMITH, West Pascagoula, Miss.



## PUBLICATION AND EDUCATION.

HERBERT A. SMITH, Editor, in Charge.

Silvics, RAPHAEL ZON.

Review, FINDLEY BURNS.

Information, TREADWELL CLEVELAND, Jr.

Education, HERBERT A. SMITH.

Printing, QUINCY R. CRAFT.

### PUBLICATIONS IN SEPTEMBER.

Bulletin 58 (Revised Edition).—The Red Gum, by A. K. Chittenden.

Circular 41.—Forest Planting on Coal Lands in Western Pennsylvania, by S. N. Spring.

Circular 42.—Consumption of Tanbark in 1905, by H. M. Hale.

Circular 43.—Cross-ties Purchased by the Steam Railroads of the United States in 1905, by H. M. Hale.

Yearbook Extract 406.—Progress of Forestry in 1905, by Quincy R. Craft.

Trade Bulletin 5.—Holding power of Railroad Spikes.

Trade Bulletin 6.—Comparison of Strength of Green Tamarack and Green Norway Pine.

Trade Bulletin 7.—Tests on Vehicle Woods.

### PROJECTS.

#### Northern Reserve District—

Location of permanent sample plots on reserves—ALFRED GASKILL.

Silvicultural studies on reserves—RAPHAEL ZON.

#### New York and New England—

Inspection of permanent sample plots, October 1 to 7—HERBERT A. SMITH, Washington, D. C.

Location of permanent sample plots—GEORGE HEWITT MYERS and W. D. STERRETT, Waterville; assistants, W. D. CLARK and HAROLD B. OAKLEAF.

### RECORD.

JAMES B. ADAMS, Special Fiscal Agent, in Charge.

Maintenance, GEO. G. ANDERSON.

Accounts, GEO. E. KING.

Purchase, HARRY C. TOWERS.

### GRAZING.

A. F. POTTER, Inspector of Grazing, in Charge.

Inspection, { C. H. ADAMS, Helena, Mont.  
                  { W. C. CLOS, Provo, Utah.

## RESERVE ORGANIZATION.

R. E. BENEDICT, Forest Inspector, in Charge.

### FOREST RESERVES.

#### NORTHERN DISTRICT.

W. T. Cox, Forest Inspector, in Charge.

##### IDAHO.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia; J. E. BARTON, Forest Assistant, Kooskia.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony; J. F. BRUNS, Forest Assistant, St. Anthony.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise; C. E. DUNSTON, Forest Assistant, Boise.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello.

Priest River Forest Reserve—B. F. McCONNELL, Forest Supervisor, Williams; R. L. FROMME, Forest Assistant, Williams.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise; C. E. DUNSTON, Forest Assistant, Boise.

Weiser Forest Reserve—JOHN B. LAFFERTY, Forest Supervisor, Weiser; G. E. CLEMENT, Forest Assistant, Weiser.

##### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Assistant Lumberman in Charge, Cass Lake.

##### MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend; M. K. STICKNEY, Forest Assistant, Helena.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula; W. W. WHITE, Forest Assistant, Missoula.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend; M. K. STICKNEY, Forest Assistant, Helena.

Helena Forest Reserve—DWIGHT BUSHNELL, Forest Supervisor, Helena; M. K. STICKNEY, Forest Assistant, Helena.

Gallatin Forest Reserve—DAVID CONKLING, Forest Supervisor, Bozeman; DORR SKEELS, Forest Assistant, Bozeman.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula; W. W. WHITE, Forest Assistant, Missoula.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Linley; BERT P. KIRKLAND, Forest Assistant.

##### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood; R. P. IMES, Assistant Forest Inspector, Deadwood.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.



## WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn; P. T. COOLIDGE, Forest Assistant, Bighorn.

Medicine Bow Forest Reserve (Wyoming).—L. G. DAVIS, Forest Supervisor, Saratoga; JAMES BLACKHALL, Forest Ranger, Saratoga; C. G. SMITH, Forest Assistant, Saratoga.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale; G. H. CECIL, Forest Assistant, Wapiti.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson; CLARENCE N. WOODS, Forest Ranger, Jackson.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti; HARRY THURSTON, Forest Ranger, Marquette; G. H. CECIL, Forest Assistant, Wapiti.

## SOUTHERN DISTRICT.

J. H. HATTON, Forest Inspector in Charge.

## ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.

Chiricahua Forest Reserve—C. T. MCGLONE, Forest Supervisor, Paradise; H. D. BURRALL, Forest Assistant, Paradise.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff; PATRICK A. FENTON, Forest Ranger, Grand Canyon.

Mount Graham Forest Reserve—J. W. FARMER, Forest Supervisor, Safford.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Supervisor, Globe.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.

Tonto Forest Reserve—W. H. REED, Forest Supervisor, Roosevelt.

## COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt.

Fruita Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison.

Holy Cross Forest Reserve—HARRY H. FRENCH, Forest Ranger in Charge, Glenwood Springs; F. H. MORRILL, Forest Assistant, Glenwood Springs.

Leadville Forest Reserve—JAMES A. BLAIR, Forest Ranger in Charge, Leadville; J. H. RAMSKILL, Forest Assistant, Leadville.

Medicine Bow Forest Reserve (Colorado Division)—SHEP N. HUSTED, Forest Ranger in Charge, Fort Collins.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling.

Pikes Peak Forest Reserve—FRANK R. SHERWIN, Forest Ranger in Charge, Denver; T. D. WOODBURY, Forest Assistant, Denver; F. D. WHITNEY, Forest Ranger, Denver.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Monte Vista; W. J. MORRILL, Forest Assistant, Monte Vista.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker.

#### KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

#### NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

North Platte Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

#### NEW MEXICO.

Gila Forest Reserve—R. C. McCLURE, Forest Supervisor, Silver City; A. O. WAHA, Forest Assistant, Silver City; M. SMITH, Forest Assistant, Silver City.

Jemez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Lincoln Forest Reserve—JOHN KERR, Forest Supervisor, Capitan.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales.

#### OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache.

#### UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante.

Bear River Forest Reserve (Logan Division)—J. F. SQUIRES, Forest Supervisor, Logan.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.

Dixie Forest Reserve—SYLVANUS COLLETT, Forest Ranger in Charge, St. George.

Fish Lake Forest Reserve—C. T. BALLE, Forest Supervisor, Fremont.

Fillmore Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville.

La Sal Forest Reserve—ORRIN C. SNOW, Forest Ranger in Charge, Castleton.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Supervisor, Murray.

Sevier Forest Reserve—TIMOTHY C. HOYT, Forest Ranger in Charge, Parowan.

Uinta Forest Reserve—WILLARD I. PACK, Forest Supervisor, Provo; H. F. STUDLEY, Forest Assistant, Provo; WM. A. ANDERSON, JOHN A. PACK, Forest Rangers.

Wasatch Forest Reserve—E. H. CLARKE, Jr., Forest Supervisor, Murray; D. S. MARSHALL, W. JONES BOWEN, Deputy Forest Supervisors.

#### WESTERN DISTRICT.

T. S. WOOLSEY, Jr., Forest Assistant, in Charge.

#### ALASKA.

Alexander Archipelago and Afognak forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan.



## CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka; C. J. BUCK, Forest Assistant, Yreka.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy; JOSEPH C. LA PLANT, Forest Ranger, Burney.

Modoc Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

San Bernardino Forest Reserve—R. H. CHARLTON, Acting Forest Supervisor, Los Angeles; NELS O. TORSTENSON, Forest Ranger, San Bernardino.

San Gabriel Forest Reserve—R. H. CHARLTON, Acting Forest Supervisor, Los Angeles; B. H. CROW, Forest Ranger, Pasadena.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara; J. REBMANN, Forest Assistant, Santa Barbara; STEPHEN H. DOUGLASS, Forest Ranger, Ventura.

Shasta Forest Reserve—G. A. COLEMAN, Forest Supervisor, Sisson; F. H. HAFLEY, Deputy Forest Supervisor, Sisson; R. C. HACKLEY, Forest Assistant, Sisson.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork; H. J. BROWN, Forest Assistant, Northfork; ERNEST BRITTEN, Forest Ranger, Three Rivers.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Supervisor, Sonora.

Tahoe Forest Reserve\*—MADISON B. ELLIOTT, Forest Supervisor, Nevada City; M. B. PRATT, Forest Assistant, Nevada City; JNO. C. WELLS, Forest Ranger, Nevada City.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaverville; C. J. BUCK, Forest Assistant, Yreka.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

## OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg; R. F. HAMMATT, Forest Assistant, Roseburg.

Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville; HENRY IRELAND, Deputy Forest Ranger, Prineville.

Blue Mountains Forest Reserve (Eastern Division)—S. S. TERRELL, Forest Supervisor, Sumpter.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland; MILTON J. ANDERSON, Forest Ranger, The Dalles.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg; R. F. HAMMATT, Forest Assistant, Roseburg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Supervisor, Walla Walla, Wash.

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\* Now includes the Yuba.

## WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting; C. H. FLORY, Forest Assistant, Orting.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspport.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Supervisor, Walla Walla.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas; W. M. DRAKE, Forest Assistant, Sumas.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan.

**Reserve Boundaries, R. E. BENEDICT.**

*Compilation, H. J. TOMPKINS.*

**PROJECTS.**

Examination of proposed reserves and additions to and eliminations from existing reserves, and examinations of agricultural land in Forest Reserves under act of June 11, 1906—W. H. B. KENT, in Charge.

**Arizona—**

H. O. STABLER; Santa Fe, N. Mex.

**California—**

R. W. AYRES, care of R. H. Charlton, Los Angeles.

**Colorado—**

STANTON G. SMITH, Dolores.

**Hawaii—**

R. S. HOSMER, Honolulu.

**Idaho—**

\* CLYDE LEAVITT, Priest River (under act of June 11, 1906).

**Montana—**

R. V. R. REYNOLDS, Washington, D. C., and R. B. WILSON, Jackson, Wyo.

**Oregon—**

L. VON WERNSTED, Warm Springs.

**Wyoming—**

A. C. RINGLAND, Saratoga.

Survey of boundaries of existing reserves:

**Colorado—**

F. E. JOY, Monte Vista.

**Idaho—**

JOHN H. CLARK, Weiser.

**SERVICE CHANGES IN SEPTEMBER.**

**APPOINTED.**

**Law—**

T. M. MOORMAN, Clerk, at \$900 per annum.

C. S. BROTHERS, Clerk, at \$900 per annum.

**Forest Products—**

A. L. HEIM, Engineer of Timber Tests, at \$1,000 per annum.

GUY T. TREMBLEY, Draftsman, at \$900 per annum.

**Publication and Education—**

T. E. WILL, Collaborator, at \$300 per annum.

HAROLD B. OAKLEAF, Forest Student, at \$300 per annum.



**Record—**

C. C. JONES, Photographer, temporary, at \$900 per annum.

**Forest Management—**

I. F. ELDREDGE, Forest Assistant, at \$1,000 per annum.

**Reserve Organization—**

SHIRLEY BUCK, Clerk, Cascade Forest Reserve (North), Oreg., at \$900 per annum.

The following persons were appointed Assistant Forest Rangers at \$900 per annum, upon certification by the Civil Service Commission:

NICOLAS L. SHEFFIELD, Dixie Forest Reserve, Utah.

ROYAL H. BARNEY, Wasatch Forest Reserve, Utah.

PARLEY MADSEN, Uinta Forest Reserve, Utah.

The following persons were appointed Forest Guards, at a salary of \$720 per annum:

ROY AINSWORTH, ERLE SCOTT, ALBERT B. WALKER, and FRANK PENNOCK, Medicine Bow Forest Reserve, Colo.

J. COLLEY, Yellowstone Forest Reserve (Absaroka Division), Mont.

WILLIAM C. MANLEY, Elkhorn Forest Reserve, Mont.

AIBO GALLEGOS, Cochetopa Forest Reserve, Colo.

BENJAMIN L. ROGERS, Pinal Forest Reserve, Ariz.

L. CASTLE and RALPH L. BATEMAN, Gila Forest Reserve, N. Mex.

WILLIAM MARTIN, Black Mesa Forest Reserve, Ariz.

OSMER LAMB and HIRUM LAMB, Sevier Forest Reserve, Utah.

E. H. BLEVINS, Chiricahua Forest Reserve, Ariz.

COLLINGSWORTH WATSON, Leadville Forest Reserve, Colo.

CALVIN BUSHBY, Blue Mountains Forest Reserve (East), Oreg.

CHAS. L. THOMPSON, Big Belt Forest Reserve, Mont.

JOHN C. TIMOTHY, Prescott Forest Reserve, Ariz.

D. H. KERBY and C. E. HERRICK, Sawtooth Forest Reserve, Idaho.

HORACE PHILLIPS, Klamath Forest Reserve, Cal.

JAMES LEESE, Jemez Forest Reserve, N. Mex.

HARRY A. SOUTH, Cascade Forest Reserve (North), Oreg.

ARTHUR E. HOLMBURG, Olympic Forest Reserve, Wash.

C. P. SNELL, Salt Lake Forest Reserve, Utah.

The following person was appointed Forest Guard, at a salary of \$300 per annum:

H. R. GOULD, Alexander Archipelago Forest Reserve, Alaska.

**PROMOTED.****Inspection—**

W. T. COX, from Assistant Forest Inspector to Forest Inspector.

F. W. REED, from Assistant Forest Inspector to Forest Inspector.

W. W. CLARK, from Assistant Forest Inspector to Forest Inspector.

F. A. SILCOX, from Forest Assistant to Assistant Forest Inspector.

**Reserve Organization—**

MADISON B. ELLIOTT, Forest Supervisor, from \$1,400 to \$1,800 per annum, Tahoe and Yuba Forest reserves, Cal.

HARRY FRENCH, from Deputy Forest Ranger, at \$1,000 per annum, to Forest Ranger in Charge of the Holy Cross Forest Reserve, Colo., at \$1,200.

JAMES A. BLAIR, from Deputy Forest Ranger, at \$1,000 per annum, to Ranger in Charge, at \$1,200 per annum, Leadville Forest Reserve, Colo.

TIMOTHY C. HOYT, from Assistant Forest Ranger, at \$900 per annum, to Ranger in Charge, at \$1,400 per annum, Sevier Forest Reserve, Utah.

G. P. CHAPIN, from Forest Ranger, at \$900 per annum, to Deputy Forest Ranger, at \$1,000 per annum, Black Mesa Forest Reserve, Ariz.

W. H. POWER, W. F. WALLACE, J. W. McLAIN, and G. F. CAMPBELL, from Forest Rangers, at \$900 per annum, to Deputy Forest Rangers, at \$1,000 per annum, San Francisco Mountains Forest Reserve, Ariz.

CARL J. STAHL, from Assistant Forest Ranger, at \$900 per annum, to Deputy Forest Ranger, at \$1,000 per annum, Cochetopa Forest Reserve, Colo.

J. H. KINNEY, from Assistant Forest Ranger, at \$900 per annum, to Deputy Forest Ranger, at \$1,000 per annum, Lincoln Forest Reserve, N. Mex.

M. D. FUNK, Assistant Forest Ranger, at \$900 per annum, to Assistant Forest Ranger, at \$1,100 per annum, Sevier Forest Reserve, Idaho.

#### SEPARATED.

##### Reserve Organization—

W. Q. GOBLE, Forest Guard, Mount Rainier Forest Reserve, Wash.

NORMANDUS C. FAULKNER, Forest Guard, Washington Forest Reserve (East), Wash.

THOMAS R. PINKERTON, Forest Guard, Washington Forest Reserve (East), Wash.

HARRY N. COLTER, Forest Guard, Washington Forest Reserve (East), Wash.

JERRY HORNE, HORACE PHILLIPS, JOHN DAVIS, E. R. WALKER, PHILLIP STEVENS, and W. A. JOHNSON, Forest Guards, Klamath Forest Reserve, Cal.

J. M. McCAMPBELL, Forest Guard, Trinity Forest Reserve, Cal.

HENRY McGUINNESS, Forest Guard, Shasta Forest Reserve, Cal.

FOSTER CHARLES, BEECHAM GEORGE, and BENJAMIN AVERY, Forest Guards, Sevier Forest Reserve, Utah.

#### FURLOUGHED.

##### Reserve Organization.

LOUIS CUTLER, Forest Guard, Grand Canyon Forest Reserve (North), Ariz.

JAMES D. VANCE, Assistant Forest Ranger, Hell Gate Forest Reserve, Mont.

NATHAN E. SNELL, Assistant Forest Ranger, Uinta Forest Reserve, Utah.

#### RESTORED FROM FURLOUGH.

##### Reserve Organization—

DANIEL C. KERR, Forest Guard, Gunnison Forest Reserve, Colo.

CLARENCE W. FRYE and HENRY O. GARRISON, Forest Rangers, Sierra Forest Reserve (South), Cal.

#### RESIGNED FROM THE SERVICE.

##### Forest Management—

F. M. PATTON, Assistant Forest Expert.

JOHN F. PRESTON, Forest Student.

##### Forest Products—

C. E. FEAGIN, Forest Agent.

##### Publication and Education—

T. E. WILL, Expert.

##### Reserve Organization—

GEORGE D. CANAVARRO, W. A. MOORE, and F. I. ROCKWELL, Forest Guards, Minnesota Forest Reserve, Minn.

DANIEL A. LINTHICUM, Forest Guard, Gila Forest Reserve, N. Mex.

C. M. WYNANT, Deputy Forest Ranger, Gila Forest Reserve, N. Mex.

ROBERT E. CLARK, Forest Guard, Santa Barbara Forest Reserve, Cal.



ALBERT L. BARROWS, Assistant Forest Ranger, Santa Barbara Forest Reserve, Cal.

EWING DE FOREST, Forest Guard, San Francisco Forest Reserve, Ariz.

JOHN W. PAWL, Forest Guard, Klamath Forest Reserve, Cal.

WILLIAM J. MILLER, Clerk, Wallowa Forest Reserve, Oreg.

THOMAS W. LAIRD, Assistant Forest Ranger, Hell Gate Forest Reserve, Mont.

GUY W. PARKER, Forest Guard, Cascade Forest Reserve (South), Oreg.

STEPHEN A. EASTON, Forest Guard, Jemez Forest Reserve, N. Mex.

ZELL M. SKOUGARD, Forest Guard, Sevier Forest Reserve, Utah.

CHAS. R. SCHOFIELD, Assistant Forest Ranger, Washington Forest Reserve (East), Wash.

JESSE P. MORTIMORE, Forest Guard, Yellowstone Forest Reserve (Wind River Division), Wyo.

JOHN R. BARBER, Forest Guard, Pinal Forest Reserve, Ariz.

RICHARD A. T. DORWALDT, Assistant Forest Ranger, Alexander Archipelago Forest Reserve, Alaska.

VICTOR H. MUMBRUE, Assistant Forest Ranger, Little Belt Forest Reserve, Mont.

S. OSCAR PROFFITT, Assistant Forest Ranger, Leadville Forest Reserve, Colo.

#### **SUSPENDED.**

##### **Reserve Organization—**

S. B. SHUMWAY, Assistant Forest Ranger, Grand Canyon Forest Reserve (South), Ariz.

ARCHIE NEWCOMB, Assistant Forest Ranger, Priest River Forest Reserve, Idaho.

#### **TRANSFERRED.**

##### **Reserve Organization—**

OTTO A. MORRISSEY, Assistant Forest Ranger, from Wichita Forest Reserve, Okla., to Lincoln Forest Reserve, N. Mex.

J. H. KINNEY, from Lincoln Forest Reserve, N. Mex., to Reserve Boundaries.

#### **DISMISSED FROM THE SERVICE.**

##### **Reserve Organization—**

ALBERT B. BRYANT, Forest Guard, Gila Forest Reserve, N. Mex.

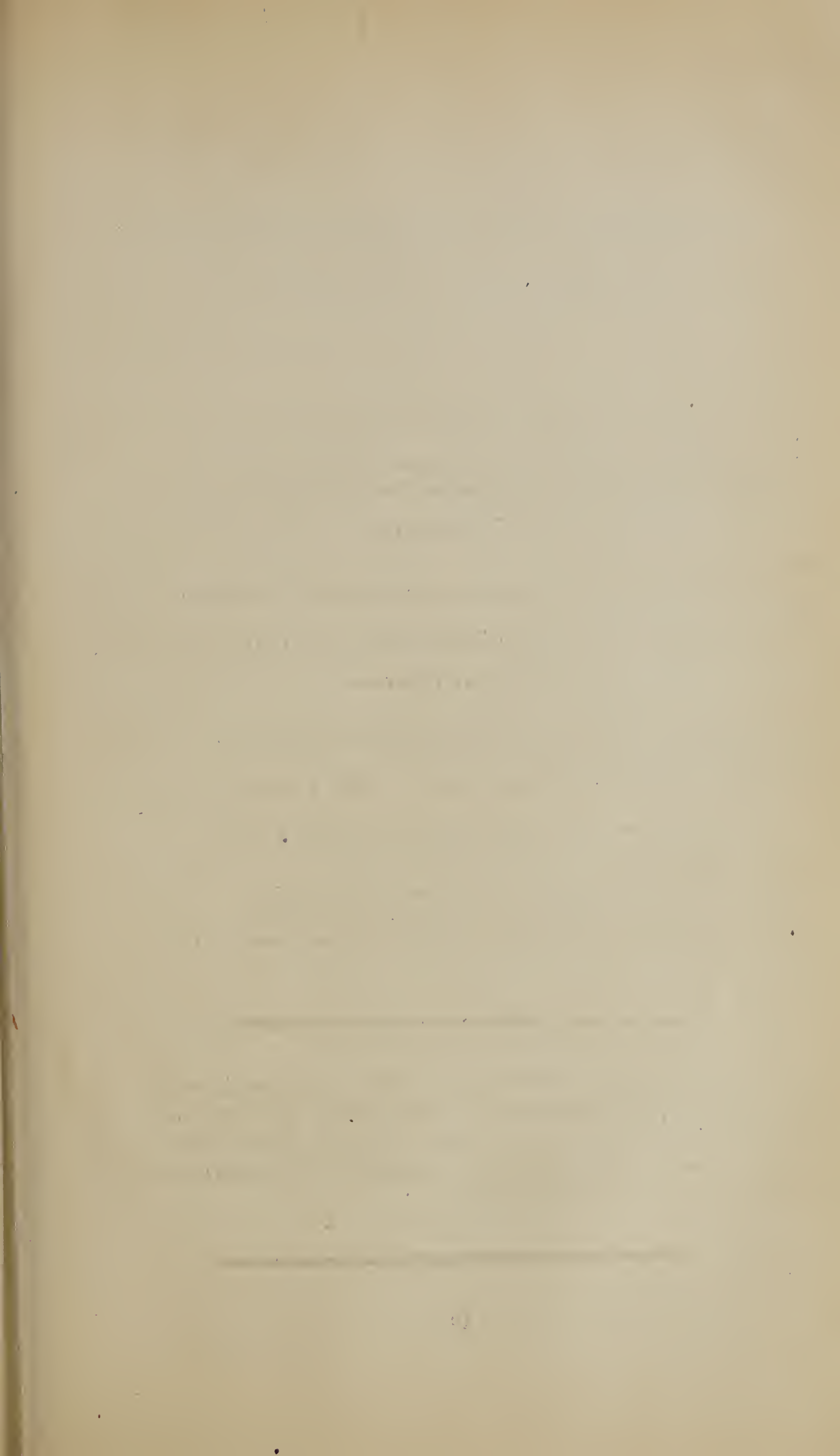
FRED J. FERRIS, Forest Ranger, Olympic Forest Reserve, Wash.

JOHN LEWIS, Assistant Forest Ranger, Black Mesa Forest Reserve, Ariz.

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With deep regret announcement is made of the death, on September 20, 1906, of Assistant Forest Ranger Hugh C. McElroy and Forest Guard Forest F. Harbon, by railway accident, while traveling on reserve business. Both officers were assigned to the Lewis and Clark Forest Reserve, Southern Division.

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# United States Department of Agriculture,

## FOREST SERVICE.

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAM FOR NOVEMBER, 1906.

A program of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are not yet fixed, and reference to projects for which plans have not been matured, are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this program complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this program or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

#### OFFICE OF THE FORESTER.

GIFFORD PINCHOT, Forester.

OVERTON W. PRICE, Associate Forester.

#### LAW.

GEORGE W. WOODRUFF, in Charge.

Claims, A. C. SHAW.

Trespass, P. P. WELLS.

Privileges, M. J. McVEAN.

#### GENERAL INSPECTION.

FREDERICK E. OLMSTED, Assistant Forester, in Charge, Tucson, Ariz.

E. T. ALLEN, *Forest Inspector*, 2802 Laurence Avenue, Tacoma, Wash.

COERT DU BOIS, *Forest Inspector*, Hot Springs, Cal.

SMITH RILEY, *Forest Inspector*, Kooskia, Idaho.

ELERS KOCH, *Forest Inspector*, Bozeman, Mont.

W. W. CLARK, *Forest Inspector*, Salina, Utah.

F. W. REED, *Forest Inspector*, Wapiti, Wyo.

M. L. ERICKSON, *Assistant Forest Inspector*, 310 Custom-House, Portland, Oreg.

F. A. SILCOX, *Assistant Forest Inspector*, Portales, N. Mex.

W. C. HODGE, Jr., *Assistant Forest Inspector*, Washington, D. C.



## FOREST MANAGEMENT.

**THOMAS H. SHERRARD**, Assistant Forester, in Charge.

**Timber Sales**, A. K. CHITTENDEN, *Forest Inspector*.

<b>Timber Inspection.</b>	}	E. E. CARTER, <i>Forest Inspector</i> , Custom-House, Portland, Oreg.
		C. S. CHAPMAN, <i>Forest Inspector</i> , Boise, Idaho.
		W. B. GREELEY, <i>Forest Inspector</i> , Truckee, Cal.
		P. G. REDINGTON, <i>Forest Inspector</i> , Saratoga, Wyo.
		J. S. HOLMES, <i>Assistant Forest Inspector</i> , Safford, Ariz.
<b>Logging Inspection.</b>	}	W. G. WEIGLE, <i>Assistant Forest Inspector</i> , Keystone, Wyo.
		E. S. BRUCE, <i>Expert Lumberman</i> , Washington, D. C.
		W. E. LA FOUNTAIN, <i>Assistant Lumberman</i> , Keystone, Wyo.
		E. M. HAMILTON, <i>Assistant Lumberman</i> , Deadwood, S. Dak.
		T. J. GARVIN, <i>Assistant Lumberman</i> , Boise, Idaho.
		A. J. NORTON, <i>Assistant Lumberman</i> , Williams, Ariz.

**Cooperation**, A. B. PATTERSON.

## PROJECTS.

### EXAMINATION OF TIMBER SALES.

#### Arizona—

Santa Catalina Forest Reserve—F. E. AMES, Tucson.

#### California—

Plumas and Diamond Mountain Forest Reserves—W. G. DURBIN, Beckwith.

Shasta Forest Reserve—P. T. HARRIS; assistants, H. G. MERRILL and R. W. WALKER, Trinity Center; C. D. PIERCE and E. J. MCGOVERN, La Moine.

Sierra Forest Reserve—I. F. ELDREDGE, Northfork; assistants, H. G. CALKINS and B. G. GOLDSMITH.

#### Idaho—

Sawtooth and Payette Forest Reserves—S. L. MOORE, Boise.

Henrys Lake Forest Reserve—Working Plan—J. G. PETERS, Rea; assistant, A. T. BOISEN.

#### Montana—

Hell Gate Forest Reserve—E. H. CLAPP, Missoula; R. Y. STUART, French Gulch.

Yellowstone Forest Reserve, Absaroka Division—J. E. KEACH, Fridley.

#### New Mexico—

Jemez Forest Reserve—A. B. RECKNAGEL, Santa Fe.

#### Oregon—

Cascade Forest Reserve (North)—G. M. HOMANS, Custom-House, Portland; assistant, W. O. DAVIS.

#### South Dakota—

Black Hills Forest Reserve—H. C. NEEL, Deadwood.

#### Wyoming—

Yellowstone Forest Reserve—I. T. WORTHLEY, Cody.

Yellowstone Forest Reserve (Wind River Division)—L. L. WHITE, Pinedale.

### COOPERATIVE.

#### California—

Study of forest conditions in cooperation with the State—A. W. COOPER, Sacramento.

#### Maine—

Forest conditions—AUSTIN CARY, Brunswick.

**Wisconsin—**

Working plans for timber sales on Indian reservations in cooperation with the State—E. M. GRIFFITH, State Forester, Madison; assistant, J. A. HOWARTH, Reserve.

**Northeastern States—**

Examination of woodlots and timber tracts—WESLEY BRADFELD, New City, N. Y.

**DENDROLOGY.**

**GEO. B. SUDWORTH**, Assistant Forester, in Charge.

**PROJECTS.****California—**

Study of tanbark trees of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley.

Special studies of little-known California trees—four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY, Leland Stanford University.

**Florida—**

Study of improved methods of turpentine, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs.

**Maryland—**

Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

**North Carolina—**

Study of characteristics of turpentines derived from American pines, in cooperation with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON (directed by Dr. CHAS. H. HERTY, Professor of Chemistry), Chapel Hill.

**Texas—**

Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin.

**FOREST EXTENSION.**

**ERNEST A. STERLING**, Assistant Forester, in Charge.

**Inspection,** { G. W. PEAVY, *in Charge*, Pasadena, Cal.  
G. B. LULL, Sacramento, Cal.

**Cooperative Planting,** S. N. SPRING.

**Reserve Planting,** L. C. MILLER.

**PROJECTS.****Arizona—**

Establishment of rangers' nurseries and studies of watershed problems, San Francisco Mountains and Tonto Forest reserves—J. D. GUTHRIE.

**California—**

Study of planted timber in cooperation with the State—S. J. FLINTHAM, Sacramento.

Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena; assistant, B. R. H. D'ALLEMAND, Santa Barbara.

Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena; assistants, E. C. CLIFFORD, S. Y. PARNAY, H. C. MUZZALL, and WILBUR ANDERSON.

**Colorado—**

Nursery and planting work and seed collecting, Pikes Peak Forest Reserve—S. B. DETWILER, Colorado City.

**Hawaii—**

Cooperative experimental planting—R. S. HOSMER, Honolulu.

**Idaho—**

Nursery construction, Pocatello Forest Reserve, and establishment of rangers' nurseries in the Cassia Forest Reserve—A. E. OMAN, Pocatello.



**Minnesota—**

Collection of forest-tree seeds for nursery and planting stations—W. H. MAST, Halsey, Nebr.

**Mississippi—**

Experimental work in hickory propagation, Holly Springs substation farm—G. L. CLOTHIER, Agricultural College.

**Montana—**

Investigation of city watersheds and establishment of rangers' nurseries in forest reserves—J. F. BOND, Grandon Hotel, Helena.

**Nebraska—**

Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey; assistants, W. H. MAST and E. B. FROTHINGHAM.

**New Mexico—**

Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard; assistant, W. B. HADLEY.

Establishment of rangers' nurseries, Gila Forest Reserve—W. R. MATTOON, Fort Bayard.

Planting reconnaissance and establishment of rangers' nurseries, Lincoln Forest Reserve—F. J. PHILIPS, Capitan.

**Pennsylvania—**

Preliminary examination for planting plan on lands of Lehigh Coal and Navigation Company—A. S. PECK, Mauch Chunk.

**Utah—**

Nursery work on the Salt Lake Forest Reserve—J. M. FETHEROLF, Silver Lake.

Planting plan work, W. H. VON BAYER, Ferron.

**FOREST PRODUCTS.**

WM. L. HALL, Assistant Forester, in Charge.

Inspection { HENRY GRINNELL.  
M. CLINE.

Forest Measurements, JOHN FOLEY.

Wood Preservation, CARL G. CRAWFORD.

Wood Chemistry, A. L. DEAN.

Wood Utilization, R. S. KELLOGG.

Reserve Engineering, ————.

**PROJECTS.****California—**

Tests of the strength of eucalyptus wood, in cooperation with the State and the University of California—L. E. HUNT, Berkeley; assistant, A. L. HEIM.

Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in Southern California—W. R. WHEATON, Hotel Lillie, Los Angeles; assistant, O. T. SWAN.

**Colorado—**

Study of the uses of dead and mature timber on forest reserves—E. R. HODSON, Monte Vista; H. S. SACKETT, Collbran.

**Connecticut—**

Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven; assistants, O. P. M. GOSS and CORNELIUS BARRY.

Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven; assistants, ERNEST BATEMAN and D. C. PARMELEE.

**Idaho—**

Experiments in treating fence posts cut from dead lodgepole pine timber on the Henrys Lake Forest Reserve—H. F. WEISS, care Homer E. Fenn, St. Anthony.

**Indiana—**

Timber testing at Lafayette, in cooperation with Purdue University—W. K. HATT, Lafayette; assistants, H. S. BETTS and J. A. NEWLIN.

**Maryland—**

Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—C. L. HILL, Parkton.

**Massachusetts—**

Studies of the value of various woods for pulp—A. D. LITTLE, 93 Broad street, Boston, and H. S. BRISTOL, 696 East First street, South Boston.

**Michigan—**

Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and the Wisconsin Central railway companies, and experiments in treating cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, New Ludington Hotel, Escanaba; assistants, H. A. PAUL and C. J. HUMPHREY.

**Oregon—**

Tests of the strength of red fir, in cooperation with the University of Oregon—J. B. KNAPP, Eugene.

**Pennsylvania—**

Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, Jr., care Philadelphia and Reading Coal and Iron Company, Pottsville.

**Utah—**

Study of the uses of dead and mature timber on forest reserves—J. D. WARNER, Provo.

**Virginia—**

Experiments in grading, seasoning, and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—M. C. JENSEN, Norfolk.

**Washington—**

Tests of western hemlock, in cooperation with the University of Washington—ROLF THELEN, Seattle.

Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma; assistant, W. H. KEMPFER.

**Wyoming—**

Study of the uses of dead and mature timber on forest reserves—FREDERICK DUNLAP, Washington, D. C.

**General Studies—**

Collection of statistics of forest products for year 1906, in cooperation with the Bureau of the Census—H. M. HALE, Washington, D. C.; GEORGE K. SMITH, Victoria Building, St. Louis, Mo.

Study of lumber prices—A. H. PIERSON, Washington, D. C.

Study of commercial processes of wood distillation—W. C. GEER, New Haven, Conn.

Study of woods used in the vehicle industry—H. B. HOLROYD, Washington, D. C.

Study of preservative treatment of piling—C. S. SMITH, West Pascagoula, Miss.



## PUBLICATION AND EDUCATION.

HERBERT A. SMITH, Editor, in Charge.

Silvics, RAPHAEL ZON.

Review, FINDLEY BURNS.

Information, TREADWELL CLEVELAND, Jr.

Education, HERBERT A. SMITH.

Printing, QUINCY R. CRAFT.

## PUBLICATIONS IN OCTOBER.

Circular 38.—Instructions to Engineers of Timber Tests.

Circular 44.—Wood Used in the Production of Pulp in 1905.

Circular 50.—Wood Used for Distillation in 1905.

Circular 51.—Wood Used for Veneer in 1905.

Press Bulletin 140.—An Interesting Experiment in Wood Paving.

Trade Bulletin 8.—Eucalypts for Timber.

Trade Bulletin 9.—Effect of Moisture on the Strength and Stiffness of Wood (Preliminary statement).

## PROJECTS.

### New England—

Location and care of permanent sample plots—W. D. STERRETT, Windham, Conn.; assistants, HAROLD B. OAKLEAF, GEO. E. SAWYER, W. HOYT WEBER, and JOHN BENTLEY, Jr.

## RECORD.

JAMES B. ADAMS, Special Fiscal Agent, in Charge.

Maintenance, GEO. G. ANDERSON.

Accounts, GEO. E. KING.

Purchase, HARRY C. TOWERS.

## GRAZING.

A. F. POTTER, Inspector of Grazing, in Charge.

Inspection, { C. H. ADAMS, Helena, Mont.  
W. C. CLOS, Provo, Utah.

## RESERVE ORGANIZATION.

R. E. BENEDICT, Forest Inspector, in Charge.

## FOREST RESERVES.

### NORTHERN DISTRICT.

W. T. COX, Forest Inspector, in Charge.

### IDAHO.

Bear River Forest Reserve—J. F. SQUIRES, Forest Supervisor, Logan, Utah.

Bitter Root Forest Reserve—CASSIUS M. DAY, Forest Supervisor, Kooskia; J. E. BARTON, Forest Assistant, Kooskia.

Cassia Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello.

Henrys Lake Forest Reserve—HOMER E. FENN, Forest Ranger in Charge, St. Anthony; J. F. BRUNS, Forest Assistant, St. Anthony.

Payette Forest Reserve—F. A. FENN, Forest Supervisor, Boise; C. E. DUNSTON, Forest Assistant, Boise.

Pocatello Forest Reserve—P. T. WRENSTED, Forest Supervisor, Pocatello.

Priest River Forest Reserve—B. F. MCCONNELL, Forest Supervisor, Williams; R. L. FROMME, Forest Assistant, Williams.

Sawtooth Forest Reserve—F. A. FENN, Forest Supervisor, Boise; C. E. DUNSTON, Forest Assistant, Boise.

Weiser Forest Reserve—JOHN B. LAFFERTY, Forest Supervisor, Weiser; G. E. CLEMENT, Forest Assistant, Weiser.

#### MINNESOTA.

Minnesota Forest Reserve—G. E. MARSHALL, Assistant Lumberman in Charge, Cass Lake.

#### MONTANA.

Big Belt Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend; M. N. STICKNEY, Forest Assistant, Helena.

Bitter Root Forest Reserve (Montana Division)—E. A. SHERMAN, Forest Supervisor, Missoula; W. W. WHITE, Forest Assistant, Missoula.

Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend; M. N. STICKNEY, Forest Assistant, Helena.

Helena Forest Reserve—DWIGHT BUSHNELL, Forest Supervisor, Helena; M. N. STICKNEY, Forest Assistant, Helena.

Gallatin Forest Reserve—DAVID CONKLING, Forest Supervisor, Bozeman; DORR SKEELS, Forest Assistant, Bozeman.

Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula; W. W. WHITE, Forest Assistant, Missoula.

Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood.

Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.

Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.

Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart.

Lolo Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula.

Long Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.

Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City.

Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Linley; BERT P. KIRKLAND, Forest Assistant.

#### SOUTH DAKOTA.

Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood; R. P. IMES, Assistant Forest Inspector, Deadwood.

Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

#### WYOMING.

Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn; P. T. COOLIDGE, Forest Assistant, Bighorn.

Medicine Bow Forest Reserve (Wyoming).—L. G. DAVIS, Forest Supervisor, Saratoga; C. G. SMITH, Forest Assistant, Saratoga; JAMES BLACKHALL, Forest Ranger, Saratoga.

Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale; G. H. CECIL, Forest Assistant, Wapiti.

Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson; CLARENCE N. WOODS, Forest Ranger, Jackson.

Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti; G. H. CECIL, Forest Assistant, Wapiti; HARRY THURSTON, Forest Ranger, Marquette.



## SOUTHERN DISTRICT.

J. H. HATTON, Forest Inspector, in Charge.

## ARIZONA.

Black Mesa Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.

Chiricahua Forest Reserve—C. T. McGLONE, Forest Supervisor, Paradise; H. D. BURRALL, Forest Assistant, Paradise.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia.

Grand Canyon Forest Reserve (Southern Division)—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff; PATRICK A. FENTON, Forest Ranger, Grand Canyon.

Mount Graham Forest Reserve—J. W. FARMER, Forest Supervisor, Safford.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Supervisor, Globe.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott.

San Francisco Mountains Forest Reserve—FRED S. BREEN, Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.

Tonto Forest Reserve—W. H. REED, Forest Supervisor, Roosevelt.

## COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt.

Fruita Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison.

Holy Cross Forest Reserve—HARRY H. FRENCH, Forest Ranger in Charge, Glenwood Springs; F. H. MORRILL, Forest Assistant, Glenwood Springs.

Leadville Forest Reserve—L. A. STROUP, Forest Supervisor, Leadville; J. H. RAMSKILL, Forest Assistant, Leadville.

Medicine Bow Forest Reserve (Colorado Division)—SHEP N. HUSTED, Forest Ranger in Charge, Fort Collins.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling.

Pikes Peak Forest Reserve—MARK A. WOODRUFF, Forest Supervisor, Denver; T. D. WOODBURY, Forest Assistant, Denver; F. D. WHITNEY, Forest Ranger, Denver.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Monte Vista; W. J. MORRILL, Forest Assistant, Monte Vista.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

White River Forest Reserve—HARRY GIBLER, Forest Ranger in Charge, Meeker.

## KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

## NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

North Platte Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

## NEW MEXICO.

Gila Forest Reserve—R. C. McCLURE, Forest Supervisor, Silver City; A. O. WAHA, Forest Assistant, Silver City; M. SMITH, Forest Assistant, Silver City.

Jemez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Lincoln Forest Reserve—JOHN KERR, Forest Supervisor, Capitan.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales.

## OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache.

## UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.

Dixie Forest Reserve—TIMOTHY C. HOYT, Forest Ranger in Charge, Parowan.

Fish Lake Forest Reserve—N. E. SNELL, Forest Ranger in Charge, Salina.

Fillmore Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville.

La Sal Forest Reserve—ORRIN C. SNOW, Forest Ranger in Charge, Moab.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Supervisor, Murray.

Sevier Forest Reserve—TIMOTHY C. HOYT, Forest Ranger in Charge, Parowan.

Uinta Forest Reserve—WILLARD I. PACK, Forest Supervisor, Provo; H. F. STUDLEY, Forest Assistant, Provo; WM. A. ANDERSON, JOHN A. PACK, Forest Rangers.

Wasatch Forest Reserve—E. H. CLARKE, Jr., Forest Supervisor, Murray; D. S. MARSHALL, W. JONES BOWEN, Deputy Forest Supervisors.

## WESTERN DISTRICT.

K. W. WOODWARD, Assistant Forest Inspector, in Charge.

## ALASKA.

Alexander Archipelago and Afognak forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan.

## CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka; C. J. BUCK, Forest Assistant, Yreka.

Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy; JOSEPH C. LA PLANT, Forest Ranger, Burney.

Modoc Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

San Bernardino Forest Reserve—R. H. CHARLTON, Forest Supervisor, Los Angeles; NELS O. TORSTENSON, Forest Ranger, San Bernardino.

San Gabriel Forest Reserve—R. H. CHARLTON, Forest Supervisor, Los Angeles; B. H. CROW, Forest Ranger, Pasadena.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.



Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara; J. REBMANN, Forest Assistant, Santa Barbara; STEPHEN H. DOUGLASS, Forest Ranger, Ventura.

Shasta Forest Reserve—G. A. COLEMAN, Forest Supervisor, Sisson; R. C. HACKLEY, Forest Assistant, Sisson.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork; H. J. BROWN, Forest Assistant, Northfork; ERNEST BRITTEN, Forest Ranger, Three Rivers.

Sierra Forest Reserve (Southern Division)—HARRISON WHITE, Forest Supervisor, Visalia.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Supervisor, Sonora.

Tahoe Forest Reserve\*—MADISON B. ELLIOTT, Forest Supervisor, Nevada City; M. B. PRATT, Forest Assistant, Nevada City; JNO. C. WELLS, Forest Ranger, Nevada City.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.

Trinity Forest Reserve—E. S. MAINWARING, Forest Ranger in Charge, Weaverville; F. H. HAFLEY, Deputy Forest Supervisor, Weaverville; C. J. BUCK, Forest Assistant, Yreka.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

#### OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg; R. F. HAMMATT, Forest Assistant, Roseburg.

Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville; HENRY IRELAND, Deputy Forest Ranger, Prineville.

Blue Mountains Forest Reserve (Eastern Division)—S. S. TERRELL, Forest Supervisor, Sumpter.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland; MILTON J. ANDERSON, Forest Ranger, The Dalles.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg; R. F. HAMMATT, Forest Assistant, Roseburg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Ranger in Charge, Wallowa.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Supervisor, Walla Walla, Wash.

#### WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting; C. H. FLORY, Forest Assistant, Orting.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodsport.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Supervisor, Walla Walla.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas; W. M. DRAKE, Forest Assistant, Sumas.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan.

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\* Now includes the Yuba.

**Reserve Boundaries,' W. T. COX.***Compilation, H. J. TOMPKINS.***PROJECTS.**

Examination of proposed reserves and additions to and eliminations from existing reserves, and examinations of agricultural land in Forest Reserves under act of June 11, 1906—W. H. B. KENT, in Charge, Portland, Oreg.

**Arizona—**

H. O. STABLER, Santa Fe, N. Mex.

**California—**

R. W. AYRES, South Pasadena.

**Colorado—**

STANTON G. SMITH, Durango.

**Hawaii—**

R. S. HOSMER, Honolulu.

**Montana—**

R. V. R. REYNOLDS, Washington, D. C., and R. B. WILSON, Jackson, Wyo.

**Oregon—**

R. B. WILSON, Portland; L. VON WERNSTED, Canyon City; CLYDE LEAVITT, Portland.

**Washington—**

LEE HARRIS, Chelan.

**Wyoming—**

A. C. RINGLAND, Saratoga.

Survey of boundaries of existing reserves:

**Colorado—**

F. E. JOY, Monte Vista.

**Idaho—**

JOHN H. CLARK, Weiser.

**SERVICE CHANGES IN OCTOBER.****APPOINTED.****Forest Products—**

GUY T. TREMBLEY, Draftsman, at \$900 per annum.

**Reserve Organization—**

L. A. STROUP, Forest Supervisor, Leadville Forest Reserve, Colorado, at \$1,400 per annum.

MARK G. WOODRUFF, Forest Supervisor, Pikes Peak Forest Reserve, Colorado, at \$1,400 per annum.

T. CLARK CALLISTER, Forest Ranger, Fillmore Forest Reserve, Utah, at \$1,200 per annum.

ELIAS H. SMITH, Assistant Forest Ranger, Dixie Forest Reserve, Utah, at \$720 per annum.

WILLIAM MCGHIE, Assistant Forest Ranger, Wasatch Forest Reserve, Utah.

The following persons were appointed forest guards, at a salary of \$720 per annum:

EARL TANNER and CHARLES JARVIS, Lolo Forest Reserve, Montana.

WILLIS CONGER and CLAUDE S. HARRISON, San Francisco Mountains Forest Reserve, Arizona.



W. F. PARKER, Weiser Forest Reserve, Idaho.

JOHN A. ZWEMER, Black Mesa Forest Reserve, Arizona.

HENRY JEFFRIES, Grantsville Forest Reserve, Utah.

WILLIAM MILLER, Grand Canyon Forest Reserve (South), Arizona.

WILLIAM B. HOGE, Forest Guard, Bear River Forest Reserve, Utah.

**Record—**

H. H. W. THIES, Carpenter, at \$720 per annum.

Mrs. M. W. DE LOSS, Clerk, at \$700 per annum.

EMILY BURGESS, Charwoman, at \$240 per annum.

**PROMOTED.**

**Forest Products—**

E. A. ZIEGLER, Forest Assistant, from \$1,100 per annum to \$1,300 per annum.

Miss E. B. STABLER, Clerk, from \$800 per annum to \$900 per annum.

**Publication and Education—**

Mrs. L. T. CONWAY, Clerk, from \$900 per annum to \$1,000 per annum.

**Record—**

Mrs. B. B. BLACKLEY, Clerk, from \$700 per annum to \$800 per annum.

Miss E. F. GORDON, Clerk, from \$600 per annum to \$700 per annum.

**Reserve Organization—**

CHARLES F. COOLEY, Forest Supervisor, from \$900 per annum to \$1,200 per annum, Grantsville Forest Reserve, Utah.

JOHN F. SQUIRES, Forest Supervisor, from \$1,200 per annum to \$1,400 per annum, Bear River Forest Reserve, Utah and Idaho.

JOHN M. SCHMITZ, from Ranger in Charge at \$1,200 per annum to Forest Supervisor at \$1,500 per annum, Wenaha Forest Reserve, Washington.

HAROLD A. E. MARSHALL, from Ranger in Charge at \$1,400 per annum to Forest Supervisor at \$1,400 per annum, Pinal Mountains Forest Reserve, Arizona.

W. H. REED, from Ranger in Charge at \$1,500 per annum to Forest Supervisor at \$1,500 per annum, Tonto Forest Reserve, Arizona.

TAYLOR E. JULIEN, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Holy Cross Forest Reserve, Colorado.

MARSHALL FULFORD, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,000 per annum, Holy Cross Forest Reserve, Colorado.

JOHN H. CLARK, from Assistant Forest Ranger at \$900 per annum to Forest Ranger at \$1,200 per annum, Weiser Forest Reserve, Idaho.

GEORGE L. WHIDDEN, from Forest Ranger at \$900 per annum to Forest Ranger at \$1,200 per annum, Gila Forest Reserve, New Mexico.

WILLIAM H. GODDARD, from Assistant Forest Ranger at \$900 per annum to Forest Ranger at \$1,200 per annum, Gila Forest Reserve, New Mexico.

JOHN B. CASE, from Assistant Forest Ranger at \$900 per annum to Forest Ranger at \$1,200 per annum, Gila Forest Reserve, New Mexico.

**SEPARATED.**

**Reserve Organization—**

W. R. STEAD and CHARLES E. JERRETT, Forest Guards, Tahoe Forest Reserve, California.

MANUEL RUIZ, Forest Guard, Black Mesa Forest Reserve, Arizona.

FOSTER G. SMITH, Forest Guard, Hell Gate Forest Reserve, Montana.

PERRY A. SOUTH, HUGH M. GUTHRIE, W. S. OLINGER, FRED J. BIRD, WALTER L. GRIBBLE, CLAYTON SIMONS, Forest Guards, Cascade Forest Reserve (North), Oregon.

J. D. COCHRAN, Forest Guard, Cascade Forest Reserve (South), Oregon.

A. B. FOSTER, Forest Guard, Lassen Peak Forest Reserve, California.

ADELBERT E. PATTAN and W. T. STARK, Forest Guards, Diamond Mountain Forest Reserve, California.

THOMAS H. WILLIAMSON, Forest Guard, Blue Mountains Forest Reserve (East) Oregon.

JESSE JONES, GEORGE H. BARNEY, GROVER T. H. LADD, CLARENCE CHAMBERLAIN, Forest Guards, Trinity Forest Reserve, California.

W. E. WARDEN, Forest Guard, Mount Rainier Forest Reserve, Washington.

J. FRED McCLAIN, Forest Guard, Chesnimnus Forest Reserve, Oregon.

ALVA L. KEELER, Forest Guard, Wallowa Forest Reserve, Oregon.

C. W. VON WELKER and J. L. WINTERS, Forest Guards, Blue Mountains Forest Reserve (West), Oregon.

GEORGE F. MILLS, PETER VANDEBURGH, JOHN CHAMBERLAIN, THOMAS CROSSLEY, H. R. BENSON, PATRICK H. KELLY, OLIVER H. LINCOLN, Bitter Root Forest Reserve, Idaho.

BENZ S. FARNSWORTH, FRANK HIGGINS, THOMAS LEE, FRANK OPALKA, EUSTACE A. WOODS, HARRY E. CROSSLEY, WILLIAM MONAHAN, Forest Guards, Lewis and Clark Forest Reserve (South), Montana.

#### **FURLOUGHED.**

##### **Law—**

T. A. SCOTT, clerk.

##### **Publication and Education—**

GEORGE HEWITT MYERS, Expert.

##### **Record—**

Miss M. P. ALLSTON.

##### **Reserve Organization—**

A. R. McCARTY, DANIEL R. CARLON, HARRY WAUGH, Forest Guards, Stanislaus Forest Reserve, California.

J. F. GALBRAITH, AXEL LARSEN, L. D. HURT, THOMAS THOMPSON, Assistant Forest Rangers, Washington Forest Reserve (West), Washington.

WARREN M. COOPER, GILBERT D. BROWN, Assistant Forest Rangers, Cascade Forest Reserve (North), Oregon.

JOHN B. SENEAL, JOSEPH D. WALLACE, FRED E. EVANS, E. W. GRIBBLE, WILLIAM E. SIMONS, SIM E. BROWDER, Assistant Forest Rangers, Cascade Forest Reserve (North), Oregon.

FRANK O. SPARHAUK and GEORGE E. BELKNAP, Assistant Forest Rangers, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

ORLANDO HEDRICK and MARTIN H. ADAMS, Assistant Forest Rangers, Lassen Peak Forest Reserve, California.

AUSTIN E. DARBY, ENOCH CARRINGTON, Assistant Forest Rangers, Plumas Forest Reserve, California.

BYRON W. HENNINGS, FRANK MAZRALL, EDWARD G. STAHL, LEWIS PURDY, Lewis and Clark Forest Reserve (North), Montana.

GEORGE SIEBENTRITT and CLARENCE L. GEORGE, Assistant Forest Rangers, Gallatin Forest Reserve, Montana.

JOSEPH C. MADSEN, Assistant Forest Ranger, Payson Forest Reserve, Utah.

HARVEY ABBEY, Assistant Forest Ranger, Diamond Mountain Forest Reserve, California.

ELMER E. CHAPSON, Assistant Forest Ranger, San Juan Forest Reserve, Colorado.

WILLIAM A. STEWART, Assistant Forest Ranger, Wallowa Forest Reserve, Oregon.

CHARLES C. WRIGHT, Assistant Forest Ranger, Hell Gate Forest Reserve, Montana.



JAMES H. DE LONG, Assistant Forest Ranger, Beaver Forest Reserve, Utah.

IRA E. SPENCER, Assistant Forest Ranger, Mount Rainier Forest Reserve, Washington.

HIRAM H. McNEIL, Assistant Forest Ranger, Washington Forest Reserve (East), Washington.

HARRY E. MILLER, Assistant Forest Ranger, Yellowstone Reserve (Shoshone Division), Wyoming.

WAYNE H. SCHERMERHORN, BENJAMIN B. HOLLAND, JOHN W. RICE, HENRY WALDREF, Assistant Forest Rangers, Lewis and Clark Forest Reserve (South), Montana.

#### **RESTORED FROM FURLOUGH.**

##### **Reserve Organization—**

JAMES D. VANCE, Assistant Forest Ranger, Lolo Forest Reserve, Montana.

NATHAN SNELL, Assistant Forest Ranger, Uinta Forest Reserve, Utah.

#### **TRANSFERRED.**

##### **Reserve Organization—**

LEE A. HARRIS, Assistant Forest Ranger, from Washington Forest Reserve (West), Washington, to Reserve Boundaries.

H. D. FOSTER, Forest Assistant, from Wenaha Forest Reserve, Washington, to Reserve Administration.

J. H. KINNEY, Deputy Forest Ranger, from Reserve Boundaries to Lincoln Forest Reserve, New Mexico.

H. F. HAFLEY, Deputy Forest Supervisor, from Shasta Forest Reserve (McCloud Division), to Trinity Forest Reserve.

#### **RESIGNED FROM THE SERVICE.**

##### **Forest Extension—**

R. C. BRYANT, Forest Inspector.

S. F. KÜMMEL, Forest Student.

##### **Record—**

M. N. ANDERSON, Clerk.

T. R. GOLDSBERRY, Messenger.

W. D. HOLLAND, Messenger.

##### **Reserve Organization—**

WILLIAM HICKLIN and HENRY W. SMITH, Forest Guards, San Francisco Mountains Forest Reserve, Arizona.

E. F. HASTINGS, Assistant Forest Ranger, San Francisco Mountains Forest Reserve, Arizona.

IRA C. NEILEIGH, Assistant Forest Ranger, Cascade Forest Reserve (North), Oregon.

JOHN W. HUSKEY and J. F. DIBBLE, Forest Guards, Cascade Forest Reserve (North), Oregon.

ENOS C. SMITH, HENRY M. LUCHT, and ED. W. LINGO, Forest Guards, Payette Forest Reserve, Idaho.

W. A. FREEMAN and JAMES D. FINE, Forest Guards, Blue Mountains Forest Reserve (West), Oregon.

GEORGE W. HALL, Deputy Forest Ranger, Shasta Forest Reserve, California.

EDWARD D. STEWART, Forest Guard, Shasta Forest Reserve, California.

H. C. FLORMANN, Assistant Forest Ranger, Black Hills Forest Reserve, South Dakota.

JAMES W. WELTY, Forest Guard, Sierra Forest Reserve (North), California.

OTTO G. ROBINETT, Forest Guard, Bitter Root Forest Reserve, Idaho.

LEWIS J. WORKMAN, Assistant Forest Ranger, Uinta Forest Reserve, Utah.

WM. A. DAHLQUIST, Forest Guard, Pocatello Forest Reserve, Idaho.  
 JAMES E. JEWELL, Forest Guard, Weiser Forest Reserve, Idaho.  
 WOODSON JEFFREYS, Forest Guard, Weiser Forest Reserve, Idaho.  
 JOHN G. TURNBOW, Assistant Forest Ranger, Uinta Forest Reserve, Utah.

**SUSPENDED.**

**Reserve Organization—**

C. E. SMITH, Forest Guard, Cascade Forest Reserve (North), Oregon.  
 HARRY H. ELLISON, Forest Guard, Shasta Forest Reserve, California.  
 AARON SNYDER, Forest Guard, Cascade Forest Reserve (North), Oregon.

**DISMISSED FROM THE SERVICE.**

**Reserve Organization—**

S. B. SHUMWAY, Assistant Forest Ranger, Grand Canyon Forest Reserve (South), Arizona.



## SERVICE NOTES FOR NOVEMBER, 1906.

The Forester returned on October 11 from a trip of inspection thru Idaho, Montana, and Wyoming.

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Capt. James B. Adams returned on October 22 from the West, where he presided at the supervisors' meetings at Glenwood Springs, Colo.; Provo, Utah; Flagstaff, Ariz.; Portland, Oreg., and Northfork, Cal. The Forester presided at the meeting at Boise, Idaho. In addition to the supervisors and rangers in charge, who represented practically all the reserves, technical men attended these meetings. At Provo were Inspectors Clark, Redington, and Benedict and Mr. Potter, Chief of the Office of Grazing; at Portland, Mr. Price, Associate Forester, Assistant Forester Olmsted, Inspectors Allen and Du Bois, and Mr. Sterling, Chief of the Office of Forest Extension; at Northfork, Inspectors Du Bois and Greeley; at Flagstaff, Inspectors L. C. Miller and J. S. Holmes; and at Glenwood Springs, Inspectors S. N. Spring and W. T. Cox.

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### GENERAL INSPECTION.

Assistant Forester Olmsted returned on September 20 from a trip thru the Alaska reserves, the particular purpose of his visit being the investigation of the complaints against the forest reserves. He found that most of the complaints were based on misunderstanding of the objects of the reserves, but, since conditions in Alaska differ from those in the Western States, special regulations are apparently necessary.

Mr. Olmsted reports that the difficulties of administration in Alaska are great, since there are no roads, but few trails, and a very sparse population. All travel is by boat.

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### LAW.

The investigation of alleged mining claims in the Plumas Forest Reserve, Cal., which was begun in the month of August under the joint control of the Departments of the Interior and of Agriculture, will be discontinued until snow disappears in the spring. Geologists L. G. Gillett, W. L. Walker, and J. A. Dorsey will make similar investigations during November in the Prescott Forest Reserve, Ariz.

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The following right-of-way cases from the Department of the Interior were returned to that Department between October 1 and 15, with the statement that the Forest Service has no objection to the granting of the easement for which application was made:

Rocky Mountain Railway Company, railroad, Medicine Bow Forest Reserve.

Mountain Supply and Ditch Company, irrigation ditch, Medicine Bow Forest Reserve.

Cottonwood Lakes Reservoir Company, irrigation reservoirs, Battlement Mesa Forest Reserve.

Joseph H. Dale, irrigation reservoir, Battlement Mesa Forest Reserve.

W. L. Perry, irrigation reservoir, Battlement Mesa Forest Reserve.

Brown & Sanford Irrigation Company, irrigation reservoir, Salt Lake Forest Reserve.

Gustavus T. Robb, irrigation reservoir, San Juan Forest Reserve.

Antoine Jacobs, irrigation reservoir, San Juan Forest Reserve.

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## FOREST MANAGEMENT.

Forest Supervisor Bartrum' has secured the clearing of a portion of a fire break around the Ashland Forest Reserve in the vicinity of the city of Ashland by confining free use to this strip. The forest along the reserve boundary is an inferior stand of yellow pine and red fir. The ground is nearly everywhere covered with a dense growth of chaparral, making fires especially hard to fight. In sales and free-use cases the cutting and piling of the underbrush has been required, as well as the piling of the brush from all trees cut. The ground so cleared has then been burned over at safe seasons. The result is a clear strip of ground, across which no fire can run, and from which back fires may be started with perfect safety. The break has already proved itself useful by stopping two fires, supposed to have been set by lightning, which would otherwise have been almost impossible to control before they burned thru a considerable stretch of timber to a ridge top.

Certain portions along the fire line however, belong to the Southern Pacific Railroad Company, and the company has given permission to the Forest Service to clear a line on its lands, since this will protect these lands as well as the reserve, and will be a great benefit to the city of Ashland and the country tributary to the lands of the railroad.

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Supervisors have been instructed that where there is an overcut in a Class B timber sale, this should be reported as an excess cutting and charged to the original sale. The duplicate letter of transmittal for the excess should therefore bear the same designation as the original sale. Care should be taken in making Class B sales, however, that the value of the timber cut does not exceed \$100.

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## DENDROLOGY.

### Extension of the Turpentine Industry to Western States.

In connection with exhaustive investigations to determine the most conservative method of chipping pine trees for turpentine, a thoro study was begun of the distinguishing characteristics of resins and turpentines derived from each species. This study has been directed mainly to southeastern pines, but it included analysis of the crude resin of the western yellow pine. The special object of investigating the western yellow pine was to ascertain whether or not it would yield commercial turpentine. Analyses of crude resin collected from California give from 20 to 22 per cent of turpentine, which is 1 or 2 per cent above the average yield from the standard turpentine pines of the South. Studies of this resin from trees in other parts of its range are being prosecuted in order to establish the general productiveness of



the species. It may be said now, however, that an extension of the turpentine industry to the western yellow-pine belt is an assured possibility. The western tree yields resin as copiously as do the long-used southern pines.

Following further yield determinations of the turpentine and of its characteristics, there remains only to be devised a practical method of "chipping" or tapping this pine. The bark of the western tree is so thick that it can not be chipped with the same tool ("hack") as is used on the thin-barked southern pines. There appears, however, to be no insurmountable difficulty in devising a practicable method of chipping the western trees.

It is too soon to decide the probable commercial value of extending this industry to western pine forests. The industry is sure, however, to add enormously to the total profit of a pine forest, which can, as is now done in the South, be turpented for a term of years previous to lumbering. If turpentineing is properly conducted no appreciable damage results to the lumber subsequently cut from the trees.

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### Accessions to the Library—Compiled by the Librarian.

Members of the Service are urged to report their special needs to the Librarian of any literature required by their work, when steps will be taken to secure it.

#### Forestry—General.

The advance movement in Michigan forestry; Michigan forestry commission. 1905. 36 p. (Ann Arbor, Mich.)

Destructive farming; G. E. Finch. 1906. 8 p. Illus. (Marion, Iowa.)

Der deutsche Wald, sein Werden und seine Holzarten (The German forest, its origin and tree species); X. Siefert. 1905. 22 p. (Druck der G. Braunschen Hofbuchdruckerei, Karlsruhe.)

The forestry work of the Ohio experiment station; W. J. Green and C. W. Waid. 1906. 11 p. Illus. (Ohio agricultural experiment station, Wooster, Ohio. Circular 50.)

Die forstlichen Verhältnisse Kanadas (The forest situation in Canada); A. Scheck. 1906. 122 p. (Deutsche Landwirtschafts-Gesellschaft, Berlin.)

What is forestry and what does it mean to the people of Michigan; F. Roth. 21 p. Illus. (Tradesman Company, Grand Rapids, Mich.)

#### Educational.

The course in forestry at the Oregon agricultural college. 1902. 20 p. Illus. (Oregon agricultural college, Corvallis, Oreg. Bulletin, ser. 1, no. 13.)

#### Forest Mensuration.

Forest mensuration; H. S. Graves. 1906. 458 p. (J. Wiley and sons, N. Y. \$4.)

#### Statistical.

Exports of farm and forest products, 1903-1905, by countries to and from which consigned. 1906. (U. S.—Dep't. of agriculture—Bureau of statistics. Bulletins 45 and 46.)

Trade with noncontiguous possessions in farm and forest products, 1903-1905. 1906. 45 p. (U. S.—Dep't. of agriculture—Bureau of statistics. Bulletin 47.)

#### Forest Insects.

The western pine-destroying bark-beetle; J. L. Webb. 1906. 14 p. Illus. (U. S.—Dep't. of agriculture—Bureau of entomology. Bulletin 58, pt. 2.)

#### Irrigation.

Practical information for beginners in irrigation; S. Fortier. 1906. 40 p. Illus. (U. S.—Dep't. of agriculture. Farmer's bulletin 263.)

#### Arbor Day.

Arbor day exercises in public schools of separate circulars for 14 states.

The state engineer and his relation to irrigation; R. P. Teele. 1906. 99 p. (U. S.—Dep't. of agriculture—Office of experiment stations. Bulletin 168.)

United States—Reclamation Service. Fourth annual report, 1904-5. 1906. 374 p. Illus. (Washington, D. C.)

#### Soil Physics.

Studien über die natürlichen Humusformen und deren Einwirkung auf Vegetation und Boden. (Studies of the natural humus forms and their influence on vegetation and soil); P. E. Müller. 1887. 324 p. Illus. (J. Springer, Berlin.)

## FOREST EXTENSION.

Mr. R. C. Bryant, whose resignation from the Service is noted elsewhere, has been called to the Yale Forest School to assist in organizing the work which is to be carried on in connection with the Chair of Applied Forestry and Practical Lumbering established by subscriptions of lumbermen thruout the country.

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### **Watershed Studies.**

Forest Reserve officers, in response to Reserve Order No. 17, recommended examinations of city watersheds in the Mount Graham, Pinal Mountains, Chiricahua, Santa Rita, Santa Catalina, and Tonto forest reserves in Arizona. During the summer Mr. L. C. Miller examined the first three of these reserves and also part of the San Francisco Mountains Reserve. He found no important city watersheds in need of planting, but advised certain utilization planting, and established two small nurseries. The city watershed work on the other Arizona reserves will be continued this fall.

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It is found that the Pocatello Forest Reserve offers a watershed project much needed for the city of Pocatello. A nursery, 48 by 72 feet in size, will be started this fall under the direction of Mr. A. E. Oman.

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Mr. J. M. Fetherolf, who has been conducting field work in the Uinta Forest Reserve, finds that the drainage basins upon which Ogden, Provo, Logan, and several smaller towns depend for their water supply, can be greatly improved by forest planting. A good nursery site is available near Kamas.

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A city watershed project in the Pecos River Reserve has been reported on favorably in a preliminary report by Mr. H. P. Baker and Mr. F. J. Philips. The Gallinas River and Santa Fe Creek drainage basins contain several good planting sites. Planting will benefit the water supply of Las Vegas and Santa Fe.

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Mr. John D. Guthrie, who has been conducting watershed studies and establishing rangers' nurseries in Idaho, has been transferred to the San Francisco Mountains Forest Reserve to take up rangers' nursery work. After he has covered this reserve he will go to the Tonto Forest Reserve for similar duty, and in addition make a special study of the conditions in the vicinity of the Roosevelt dam of the Salt River irrigation project.

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### **Rangers' Nurseries.**

Plans for rangers' nurseries are beginning to come in from the technical men who have been assisting in starting these nurseries during the summer. Wherever possible, shade frames have been constructed and the ground prepared for seed sowing next spring. The plans submitted will be edited and copies sent to the rangers concerned. Actual work is being undertaken this fall only where permanent headquarters have been established. The nurseries thus started under technical supervision will serve as models for the rangers in undertaking similar work in the future.



### Planting Stations.

As the result of a recent inspection of the planting operations in the Pikes Peak Forest Reserve by Mr. E. A. Sterling and Mr. G. W. Peavy, the Clyde nursery has been abandoned and the work concentrated at the Bear Creek nursery. Successful seedling production is impossible at Clyde because of the high elevation and short growing season. The work at Bear Creek will be put entirely on an experimental basis for the present.

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Recent counts show that between 50 and 60 per cent of the 319,000 seedlings planted in the Dismal River Forest Reserve last spring are alive. The loss was chiefly caused by a period of dry, windy weather immediately following planting. Most of the trees planted were 2 years old. It is expected to greatly reduce the loss in the future by using older seedlings and by planting with the mattock instead of with the spade. An experimental plantation was made in October to determine the feasibility of fall planting.

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### Cooperative Planting.

A planting plan has been prepared by Mr. Flintham for the Bixby Ranch in the San Diego Hills, Orange County, Cal. This covers an area of 7,000 acres, most of which is the typical chaparral land of southern California. It is recommended that 3,000 acres be planted. The sugar gum is selected for the most extensive planting, since it is expected that this species will endure the conditions upon the more elevated and unfavorable portion of the tract. The gray and the lemon gums, as well as two varieties of iron bark, are also recommended for timber. Black locust, which, tho not indigenous to the western United States, is found to grow extremely well in this part of California, is recommended for post production. It is estimated that it will require 2,837,500 seedlings of all species to plant the area designated as desirable planting sites. Close spacing is advised in order to reduce the amount of cultivation. Thinning is advised after the fifth year and every second year thereafter until the stand reaches the age of 12 years. The trees are then to remain to develop to timber dimensions. It is estimated that the locust will become merchantable in from ten to fifteen years.

A nursery should be established for growing seedlings, and full instruction for nursery operations is included in the plan.

Recommendations for protection against fire provide for:

Posting cloth fire-warning notices, printed in both Spanish and English.

Establishment of patrol, a system including a telephone station.

Fencing the greater portion of the tract to exclude live stock.

The cost of planting is estimated at from \$15 to \$20 per acre.

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A planting plan prepared by Mr. Allen S. Peck for the lands of the Great Bear Spring Company, of Oswego County, N. Y., has just been transmitted to the company.

The plan considers both use and appearance. The soil is almost pure sand underlaid with gravel, and for this reason the number of species that can be planted is limited. Chestnut is the only hardwood recommended. The other trees, which are conifers, are red pine, Scotch pine, white pine, Norway spruce, European larch, tamarack, and arborvitæ. The plan covers about 96 acres, and the area is divided into five distinct planting sites. It is estimated that the total number of trees required for planting will be 124,122. The plan includes detailed directions for planting, and estimates the number of seedlings which can be planted per day. It is expected that the plantation will reach merchantable size in from forty to sixty years, with the exception of the chestnut and larch, which may be cut when about 20 years old.

### **Special Studies.**

Mr. E. O. Siecke has completed his field work in the Truckee-Carson irrigation project, and has since been engaged in seed collecting and rangers' nursery work in California. His work in the irrigation project covered the question of forest planting by settlers, as well as Government planting on waste lands, along canals and on an experimental area. Prof. F. G. Miller has completed a similar study in the North Platte project and on irrigated land mainly under private ditch in the South Platte country.

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## **FOREST PRODUCTS.**

### **Fence Post Treatments.**

The Forest Service will experiment in November to determine the best method of treating fence posts cut from dead lodgepole pine on the Henrys Lake Forest Reserve.

Large bodies of burned lodgepole pine exist on many reserves. Should these tests prove successful, similar work will probably be carried on in other places.

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### **Telephone Pole Treatments.**

The preservative treatment of western yellow pine telephone poles with creosote oil has begun at Los Angeles. Several different methods of application are being tried, and excellent results have already been obtained, both with a special butt apparatus and in open tanks.

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### **Protection and Treatment of Ties.**

Two experimental pieces of track are now being laid in Washington and Montana on the lines of the Northern Pacific Railway. These are laid for the purpose of testing the effect on ties of metal and wooden tie plates, and the durability of red fir and tamarack ties treated with zinc chlorid and creosote as compared to seasoned and green untreated ties of the same species.

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### **Dead and Down Timber on Reserves.**

A study of dead and down timber on the forest reserves has resulted in the location of many merchantable stands of dead timber. Among the most important are the fire-killed tracts in the Holy Cross Reserve in Colorado. An estimate places the total of all species of fire-killed timber on this reserve at 150,000,000 board feet. Most of it is in good condition, and prospects for marketing it are good.

A study similar in character to the one made on the Holy Cross Reserve has also been completed for the Gunnison Reserve. The estimated merchantable dead timber on this reserve is 88,000,000 board feet.

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### **Statistics of Forest Products.**

As the result of an agreement between the Forest Service and the Bureau of the Census the annual statistics dealing with the production of forest products hereafter will be collected and compiled by the two bureaus in cooperation. The resultant publications will be issued jointly.

The Forest Service will maintain an active cooperation in the work.



**Maps of Forest Reserves.**

The enlarging of the topographic sheets covering forest reserves is progressing as fast as the United States Geological Survey can do the work. The enlarged maps are on the scale of 2 inches to the mile and cover one township each. The reserves already finished are the Black Hills, Jemez, San Francisco Mountains, and Santa Catalina.

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**Investigations.**

Mr. C. G. Crawford, in charge of the section of wood preservation, has been on a three-months' tour thru the Gulf States and the Pacific coast States, investigating the construction of timber-treating plants and the different methods employed in treating timbers. He has also been inspecting experiments carried on by the Forest Service in wood preservation in California, Washington, Idaho, and Montana.

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**PUBLICATION AND EDUCATION.**

Mr. Alfred Gaskill has completed his summer's work in the location of permanent sample plots on reserves and has submitted a report to the Forester.

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Mr. Raphael Zon has returned from his studies of silvicultural conditions on reserves, and will prepare a report for the Forester.

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The following addresses on forest subjects were delivered in October:

National Association of Vehicle and Implement Manufacturers, Chicago, Ill., October 10; Mr. H. B. Holroyd.

Kentucky State Development Convention, Winchester, Ky., October 12; Mr. H. A. Smith.

Institute held by Kentucky Department of Agriculture, Labor, and Statistics, Lexington, Ky., October 23; Mr. S. J. Record.

American Civic Association, Milwaukee, Wis., October 26; Mr. Ernest A. Sterling.  
Johnson County Farmers' Institute, Vienna, Ill., October 27; Mr. Samuel J. Record.

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Since but 1,000 copies can be printed of a publication of more than 100 pages, the present supply of Bulletin 70, "Effect of Moisture on the Strength and Stiffness of Wood," suffices only for timber-testing laboratories and the libraries of technical schools. The substance of the results will later be given general distribution in circular form. Those who wish to study the subject more in detail can obtain a copy of the bulletin at a cost of 15 cents of the Superintendent of Documents, Government Printing Office, Washington, D. C.

**RECORD.****Accounts.**

Careful adherence on the part of members of the Service to the instructions printed under the heading "Supervisors' accounts," The Use Book, page 120, will be a great help in getting accounts settled promptly. The direction that accounts on Form 3, Form 4, or Form A be not submitted in duplicate is disregarded by some members; the result is inconvenience and loss of time in the Section of Accounts. The failure of a number of members to send in with their accounts Form 99 or Form 98, as the case may require, makes it necessary to delay the settlement of their accounts until the form is received.

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Accounts for unusually heavy expenses for services or supplies in fighting fires need not be held until the end of the month to be rendered with monthly reimbursement accounts, but may be submitted immediately after the expenses have been incurred and paid. Great care should be taken, however, in these emergency accounts to have only expenses of fire fighting included.

The object of this is to enable officers of the reserves to be reimbursed promptly for advances made by them for fire fighting expenses from their own personal funds.

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If for any reason receipts or other evidence required to support charges in any monthly account can not be secured in time, these charges should be omitted from the account for that month. The remaining portion of such an account can thus be rendered in the usual manner. Items of expense omitted in this way from any monthly account may be submitted in any subsequent account, after the required receipts or evidence are secured.

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**Supplies.**

The Instrument Committee is responsible for maintaining the standard not only of instruments but of all equipment and supplies intended for use in the field. Suggestions for new equipment or for changes in existing types for consideration by this committee should be sent to the Forester.

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A change has been made in the pattern of the Century camera hitherto in use by the Service. The film-pack adapter was found to give results uniformly out of focus, and the film-roll holder was substituted for it. The cameras of the Service are being remodeled as rapidly as possible, and only those of the new type will be issued.

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The existing pattern of marking ax has been found unsatisfactory, and the Service has called for bids on a new model with a longer but narrower marking head, of thicker and more beveled blade, and of a better grade of steel. In the meantime a supply of suitable axes for immediate needs has been procured in order to avoid delay in carrying on necessary work on the reserves.

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Tables will be furnished for office use both in Washington and in the field, instead of the ordinary office desk. This change will make effective the instructions in Service Order No. 106 against putting unanswered letters or any other papers dealing with unfinished current business in drawers or pigeonholes. The table adopted



as standard is of quartered oak, with dull finish, and is strongly built. It has the advantage of being much less expensive and serves every useful purpose of the ordinary desk.

The flat desk pad, 19 by 24 inches (item 12, List I, page 112 of The Use Book), should not be included hereafter in requisitions made by members stationed away from Washington. The pad is unmailable on account of its size, and the cost of transportation by express makes its use in the field impracticable. Desk blotters of the same size can be mailed in rolls, and will be supplied in filling requisitions for the pads.

### New Forms.

The new Forest Ranger's Notebook (Form 874) assembles in a loose-leaf binder several of the forms most frequently used by forest officers, together with blank sheets for field notes and mapping. These forms are necessarily much reduced in size, but it is expected that the greater ease with which they can be kept in order and carried in the pocket will much more than offset the increased care required to fill out the small forms legibly. Following are the consecutive order and numbers of forms which comprize the new book:

Form 874.—Instructions.

Form 874-2.—Diary (superseding Form 847).

Form 874-3.—Certificate of Service (superseding Form 647).

Form 874-4.—Information Needed for Special Privilege Report.

Form 874-5.—Instructions to Scalers (superseding Forms 942 and 949).

Form 874-6.—Scale Record.

Form 874-7.—Notes on Sale.

Form 874-8.—Original Free Use Permit.	{ Form 831 is superseded by these forms, but a supply of the old form will be kept for emergency use.
Form 874-9.—Duplicate Free Use Permit.	

Form 874-10.—Record of Claims and Privileges—Township plat (east half).

Form 874-11.—Record of Claims and Privileges—Township plat (west half).

Form 874-12.—Grazing Record.

Form 874-13.—Blank sheets for field notes and mapping.

The following forms have also been adopted since The Use Book was printed:

110—Report on Agricultural Homestead Applications (sheet).

111—Ranger Stations (file card).

138—Forest Fire Penalty Notice (card, 8 by 10½, for displaying in post offices and other places where there will be no exposure to the weather).

B—Authority to Publish Advertisement, and Voucher for Advertising.

962—Wood Pulp Investigations.

978—Card Record of Timber Tests.

980—Card for Mailing List Addresses.

981—Calendar of Reserve Reports.

995—Office Stationery Cards.

119—Section plats, with memorandum blank bound, 80 in a book, with flexible cover, especially for use of geologists in examining mining claims.

Members of the Service should correct in their copies of The Use Book the list of forms printed on pages 116 to 118. New forms should be added and superseded forms stricken out.

## GRAZING.

Mr. A. F. Potter, Inspector of Grazing, has attended stockmen's meetings at Butte and Helena, Mont., and Albuquerque, N. Mex., in the effort to make clear the policy of the Forest Service relative to grazing in the reserves and to correct misunderstanding regarding it. A resolution was adopted at Butte, Mont., in which the stockmen expressed satisfaction with the information given.

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For the season of 1906 there were 14,093 cattle and horse grazing permits issued, covering 1,015,148 head, of which 849,703 head were for the summer season and 165,445 for the year-long season. There were also issued 2,500 sheep-grazing permits, covering 5,763,100 head of sheep, two lambs counting as one grown sheep.

A more strict compliance with the salting regulation will be insisted upon in 1907.

The grazing application, Form 657, has been changed with important additions, and renumbered No. 879.

Winter grazing will be allowed when not detrimental to any interest.

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In 1907 only the sheep six months old and over at the time of entering a reserve will be counted and paid for, but the fees will be increased sufficiently to compensate for the young stock.

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## RESERVE ORGANIZATION.

Meetings of the supervisors and various Chiefs of Office have recently been held in Glenwood Springs, Colo., Provo, Utah, Flagstaff, Ariz., Portland, Oreg., Northfork, Cal., and Boise, Idaho. Every detail of field and office work was touched on, and the regulations and instructions of The Use Book were thoroly discust. Many valuable suggestions for changes and additions were made and submitted to the Forester. Among the important results of these meetings is the opportunity they give the field men and the members of the general force to become acquainted.

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### Reserve Boundaries.

A great many more applications for agricultural land under the act of June 11, 1906, are being received than were expected; and Mr. Kent, who is in charge of the field examination of the lands applied for, has asked for four more men to assist him in the work. Already two reserves—the Priest River in Idaho and the Bitterroot in Montana—have been covered. In the former reserve all but a very few claims were approved and recommended for listing, but in the latter the applications were found to cover heavy timberland and were purely of a speculative character. If cleared, they would, with irrigation, produce good crops, but no water for irrigation was available, as evidenced by the thousands of acres of cut-over lands outside the reserve, which are not and can not be placed under cultivation.

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Forest officers in cnarge seem to be in doubt regarding items which should be included under Form 99, especially in regard to communication, shelter, and equipment. Nails and fence staples should be charged to shelter and not to equipment. Paint used in painting signboards should be charged to communication and not to shelter. Stoves and stovepipes are shelter items and not equipment.



Advertisements of proposals for bids for the construction of a fence for a buffalo pasture and necessary buildings on the Wichita Forest Reserve, Oklahoma, appeared in the St. Louis Republic, the New York Sun, and the Washington Post on October 17, the bids to be opened on November 15. This fence will be built under a special appropriation of Congress of \$15,000. The buffalo are given by the New York Zoological Garden, and all the arrangements for their care have been drawn up by Mr. Wm. T. Hornaday, the naturalist.

The committee on uniforms appointed by the Forester reports that arrangements for the delivery of the various parts of the uniform are completed, and a reserve order will soon be issued describing the uniform and giving full instructions in regard to the manner of obtaining it.

October 1 to 15 the following reserves were created:

	Acres.
Santa Barbara (add.), Cal .....	143,777
Siskiyou, Oreg.....	716,160 (approximate)
Mount Taylor, N. Mex.....	114,000 (approximate)
Uinta (add.), Utah and Wyo.....	38,400 (approximate)
Diamond Mountain (add.), Cal.....	15,700 (approximate)

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3,989,591

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Area of 112 reserves September 1..... 109,097,927

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Approximate area of 116 reserves October 15..... 113,087,518

## RESERVE DISTRICTS.

### Northern.

During the summer the Forest Service constructed over 50 miles of telephone line in the Bighorn Reserve. One 35-mile line connects the supervisor's headquarters at Bighorn with two rangers' stations and the cutting operations of the McShane Lumber Company. Another 18-mile line connects a ranger's station on Clear Creek with the town of Buffalo.

The entire Bear River Forest Reserve in Idaho and Utah has been put under administration, with Forest Supervisor J. F. Squires in charge. The boundary between districts 1 and 2 has been changed so as to leave all of the Bear River Reserve in the northern district.

The Long Pine Forest Reserve, Mont., was created by Presidential proclamation September 24. This is a small reserve situated in the southeastern corner of the State near the headwaters of the Little Missouri. Supervisor J. F. Smith, of the Black Hills Reserve, has been put in charge, and a ranger is now looking after the needs of the many ranchers who must obtain their winter's supply of wood from this reserve.

The Lolo Forest Reserve, Mont., has been created and put under administration with Supervisor E. A. Sherman in charge.

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An investigation will be made to determine the extent of damage being done to forest reserves by fumes from smelters in the copper region of Montana. Upon the results of this investigation will depend the action to be taken in a number of smelter cases thruout the West.

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#### **Western.**

Forest Supervisor Coleman, of the Shasta Reserve, has been instructed to build a telephone line on the western portion of his reserve. The proposed line will connect five ranger stations with the office headquarters and will simplify the administration and fire protection. A special feature of the line is a branch connecting with a lookout point, where fires can be seen over a large portion of the reserve and reported to headquarters.

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The recent proclamation combining the Yuba Reserve with the Tahoe Reserve is of particular interest. Similar action will be taken in the case of other reserves where records can be simplified, correspondence lessened, and administration made more efficient.

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Forest Supervisor Charlton, of the San Gabriel and San Bernardino reserves, will undertake this winter a large amount of fire-line work for the protection of the country in the immediate vicinity of Riverside, and the local residents have subscribed some \$2,000 to aid in this work. The burning of a fire line on each side of the Santa Fe line crossing the Cajon Pass and the burning of wide fire lines thru dangerous grass country at the foot of the mountains outside the San Bernardino Reserve probably accounts for the excellent protection accorded the reserves during the past season. The rangers burned this fire line at night when the wind was blowing away from the reserve line and four or five men sometimes burned 2 to 3 miles in one night.

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#### **Southern.**

Four miles of telephone line have been completed in the Salt Lake reserve, connecting the rangers' headquarters and the nursery with the supervisor's headquarters. Eighteen-foot red fir poles, 7 inches at the top ends, were used and were set 4 feet in the ground.





Issued December 1, 1906.

# United States Department of Agriculture,

## FOREST SERVICE.

GIFFORD PINCHOT, Forester.

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### FIELD PROGRAM FOR DECEMBER, 1906.

A program of field work and assignments in the Forest Service is issued monthly. The names of members whose assignments are not yet fixed, and reference to projects for which plans have not been matured, are necessarily omitted.

It is requested that the members of the Forest Service cooperate in making this program complete and accurate. Information concerning errors or omissions, and changes of project or of address for the following month, should be sent by members to the offices of their respective chiefs not later than the 20th of the month.

Unless the address of a member is given in this program or is definitely known, he should be addressed in care of the Forest Service, Washington, D. C.

#### OFFICE OF THE FORESTER.

GIFFORD PINCHOT, Forester.

OVERTON W. PRICE, Associate Forester.

#### LAW.

GEORGE W. WOODRUFF, in Charge.

Claims, A. C. SHAW.

Trespass, P. P. WELLS.

Privileges, M. J. McVEAN.

#### GENERAL INSPECTION.

FREDERICK E. OLMSTED, Assistant Forester, in Charge, Washington, D. C.

E. T. ALLEN, *Forest Inspector*, Washington, D. C.

COERT DU BOIS, *Forest Inspector*, Washington, D. C.

SMITH RILEY, *Forest Inspector*, Washington, D. C.

ELERS KOCH, *Forest Inspector*, Bozeman, Mont.

W. W. CLARK, *Forest Inspector*, Provo, Utah.

F. W. REED, *Forest Inspector*, Wapiti, Wyo.

M. L. ERICKSON, *Assistant Forest Inspector*, 310 Custom-House, Portland, Oreg.

F. A. SILCOX, *Assistant Forest Inspector*, Charleston, S. C.

W. C. HODGE, Jr., *Assistant Forest Inspector*, Washington, D. C.



## FOREST MANAGEMENT.

THOMAS H. SHERRARD, Assistant Forester, in Charge.

Timber Sales, A. K. CHITTENDEN, *Forest Inspector*.

Timber Inspection.	{	E. E. CARTER, <i>Forest Inspector</i> , Washington, D. C.
		C. S. CHAPMAN, <i>Forest Inspector</i> , Boise, Idaho.
		P. G. REDINGTON, <i>Forest Inspector</i> , Saratoga, Wyo.
		J. S. HOLMES, <i>Assistant Forest Inspector</i> , Safford, Ariz.
		W. G. WEIGLE, <i>Assistant Forest Inspector</i> , Keystone, Wyo.
Logging Inspection.	{	E. S. BRUCE, <i>Expert Lumberman</i> , Washington, D. C.
		W. E. LA FOUNTAIN, <i>Assistant Lumberman</i> , Keystone, Wyo.
		E. M. HAMILTON, <i>Assistant Lumberman</i> , Deadwood, S. Dak.
		T. J. GARVIN, <i>Assistant Lumberman</i> , Boise, Idaho.
		A. J. NORTON, <i>Assistant Lumberman</i> , Williams, Ariz.

Cooperation, \_\_\_\_\_

### PROJECTS.

#### EXAMINATION OF TIMBER SALES.

##### Arizona—

Santa Catalina Forest Reserve—F. E. AMES, Tucson.

##### California—

Plumas and Diamond Mountain forest reserves—W. G. DURBIN, Beckwith.

Shasta Forest Reserve—P. T. HARRIS; assistants, H. G. MERRILL and R. W. WALKER, Trinity Center; C. D. PIERCE and E. J. MCGOVERN, La Moine.

Sierra Forest Reserve—I. F. ELDRIDGE, Madera; assistants, H. G. CALKINS and B. G. GOLDSMITH.

##### Idaho—

Sawtooth and Payette forest reserves—S. L. MOORE, Boise.

##### Montana—

Helena Forest Reserve—E. H. CLAPP, Helena.

##### Oregon—

Cascade Forest Reserve (North)—G. M. HOMANS, Custom-House, Portland; assistant, W. O. DAVIS.

##### South Dakota—

Black Hills Forest Reserve—H. C. NEEL, Deadwood.

##### Utah—

Beaver Forest Reserve—A. B. RECKNAGEL, Beaver.

##### Wyoming—

Medicine Bow Forest Reserve—J. E. KEACH, R. Y. STUART, C. A. GALARNEAU, R. S. POND, Keystone.

Yellowstone Forest Reserve—I. T. WORTHLEY, Cody.

Yellowstone Forest Reserve (Wind River Division)—L. L. WHITE, Pinedale.

#### COOPERATIVE.

##### Maine—

Forest conditions—AUSTIN CARY, Brunswick.

##### Wisconsin—

Working plans for timber sales on Indian reservations in cooperation with the State—E. M. GRIFFITH, State Forester, Madison; assistant, J. A. HOWARTH, Odanah.

##### Northeastern States—

Examination of woodlots and timber tracts—WESLEY BRADFIELD, Washington, D. C.

## DENDROLOGY.

GEO. B. SUDWORTH, Assistant Forester, in Charge.

## PROJECTS.

## California—

Study of tanbark trees of Pacific coast—Prof. W. L. JEPSON; permanent address, Berkeley.

Special studies of little-known California trees—four-leaf pine, Torrey pine, Bishop pine—Prof. W. R. DUDLEY, Leland Stanford University.

## Florida—

Study of improved method of turpentineing, in cooperation with the Hillman-Sutherland Land Company—FRANK KLARPP, Green Cove Springs.

## Maryland—

Distribution and description of forests in wooded counties, in cooperation with the State Geological Survey—C. D. MELL, Washington, D. C.

## North Carolina—

Study of characteristics of turpentines derived from American pines, in cooperation, with the Department of Chemistry, University of North Carolina—GEORGE A. JOHNSTON (directed by Dr. CHAS. H. HERTY, Professor of Chemistry), Chapel Hill.

## Texas—

Study of desert junipers—Prof. W. L. BRAY; permanent address, Austin.

## FOREST EXTENSION.

ERNEST A. STERLING, Assistant Forester, in Charge.

Inspection, G. W. PEAVY, *in Charge*, Pasadena, Cal.  
G. B. LULL, Sacramento, Cal.  
Cooperative Planting, S. N. SPRING.  
Reserve Planting, L. C. MILLER.

## PROJECTS.

## Arizona—

Establishment of rangers' nurseries and studies of watershed problems, Tonto Forest Reserve—J. D. GUTHRIE, Roosevelt.

## California—

Study of forest planting in cooperation with the State—S. J. FLINTHAM, Hotel Hollenbeck, Los Angeles.

Nursery and planting work, Santa Barbara Forest Reserve—G. W. PEAVY, Pasadena; assistant, B. R. H. D'ALLEMAND, Santa Barbara.

Nursery and planting work, San Gabriel Forest Reserve—G. W. PEAVY, Pasadena; assistants, E. C. CLIFFORD, S. Y. PARNAY, H. C. MUZZALL, and WILBUR ANDERSON.

## Colorado—

Nursery work and seed collecting, Pikes Peak Forest Reserve—S. B. DETWILER, Colorado City.

## Hawaii—

Cooperative experimental planting—R. S. HOSMER, Honolulu.

## Nebraska—

Nursery and planting work, Dismal River Forest Reserve—C. A. SCOTT, Halsey; assistant, W. H. MAST.



**New Mexico—**

Nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation—W. R. MATTOON, Fort Bayard; assistant, W. B. HADLEY.

Examination for forest planting on the Hondo and Carlsbad irrigation projects—W. R. MATTOON, Fort Bayard.

Planting reconnaissance and establishment of rangers' nurseries, Lincoln Forest Reserve—J. F. PHILIPS, Capitan.

**General Studies—**

Preparation of reports and compilation of data on planting stations—J. M. FETHEROLF, Washington, D. C.

Preparation of reports and work connected with reserve reconnaissance—J. F. BOND, Washington, D. C.

**FOREST PRODUCTS.**

WM. L. HALL, Assistant Forester, in Charge.

Inspection, { HENRY GRINNELL.  
M. CLINE.

Forest Measurements, JOHN FOLEY.

Wood Preservation, CARL G. CRAWFORD.

• Wood Chemistry, A. L. DEAN.

Wood Utilization, R. S. KELLOGG.

Reserve Engineering, W. E. HERRING.

**PROJECTS.****California—**

Tests of the strength of eucalyptus wood, in cooperation with the State and the University of California—L. E. HUNT, Berkeley; assistant, A. L. HEIM.

Experiments in seasoning and treating telephone and other poles for electric wires, in cooperation with electric companies in Southern California—W. R. WHEATON, Hotel Lillie, Los Angeles; assistant, O. T. SWAN.

**Connecticut—**

Timber tests, with special reference to the influence of method of drying on the strength of timber, in cooperation with Yale University—J. W. TOUMEY and H. D. TIEMANN, Yale Forest School, New Haven; assistants, O. P. M. GOSS and CORNELIUS BARRY.

Experiments in wood preservatives—A. L. DEAN, Sheffield Scientific School, Yale University, New Haven; assistants, ERNEST BATEMAN and D. C. PARMELEE.

**Idaho—**

Experiments in treating fence posts cut from dead lodgepole pine timber on the Henrys Lake Forest Reserve—H. F. WEISS, care Homer E. Fenn, St. Anthony.

**Indiana—**

Timber testing at Lafayette, in cooperation with Purdue University—W. K. HATT, Lafayette; assistants, H. S. BETTS and J. A. NEWLIN.

**Maryland—**

Experiments in seasoning chestnut telephone poles, in cooperation with the American Telephone and Telegraph Company and the Postal Telegraph-Cable Company—C. L. HILL, Parkton.

**Massachusetts—**

Studies of the value of various woods for pulp—A. D. LITTLE, 93 Broad street, Boston, and H. S. BRISTOL, 696 East First street, South Boston.

**Michigan—**

Experiments in seasoning and treating hemlock and tamarack cross-ties, in cooperation with the Chicago and Northwestern and the Wisconsin Central

railway companies, and experiments in treating cedar telephone poles, in cooperation with the American Telephone and Telegraph Company—W. F. SHERFESEE, New Ludington Hotel, Escanaba; assistants, H. A. PAUL and C. J. HUMPHREY.

#### Oregon—

Tests of the strength of red fir, in cooperation with the University of Oregon—J. B. KNAPP, Eugene.

#### Pennsylvania—

Experiments in treating mine timbers, in cooperation with the Philadelphia and Reading Coal and Iron Company—JOHN M. NELSON, jr., care Philadelphia and Reading Coal and Iron Company, Pottsville.

#### Utah—

Study of the uses of dead and mature timber on forest reserves—J. D. WARNER, Washington, D. C.

#### Virginia—

Experiments in grading, seasoning, and treating cross-arms, in cooperation with the American Telephone and Telegraph Company—M. C. JENSEN, Norfolk.

#### Washington—

Tests of western hemlock and other forest-reserve timbers, in cooperation with the University of Washington—ROLF THELEN, Seattle.

Seasoning and treating experiments on red fir, tamarack, and cedar cross-ties, Tacoma and Pasco, Wash., and Sand Point, Idaho, in cooperation with the Northern Pacific Railway Company—H. B. EASTMAN, 718 North K street, Tacoma; assistant W. H. KEMPFER.

#### General Studies—

Collection of statistics of forest products for year 1906, in cooperation with the Bureau of the Census—H. M. HALE, Washington, D. C.; GEORGE K. SMITH, Victoria Building, St. Louis, Mo.

Study of lumber prices—A. H. PIERSON and E. H. FROTHINGHAM, Washington, D. C.

Study of commercial processes of wood distillation—W. C. GEER, New Haven, Conn.

Study of woods used in the vehicle industry—H. B. HOLROYD, Washington, D. C.

Study of preservative treatment of piling.—C. S. SMITH, West Pascagoula, Miss.

### PUBLICATION AND EDUCATION.

HERBERT A. SMITH, Editor, in Charge.

Silvics, RAPHAEL ZON.

Review, FINDLEY BURNS.

Information, TREADWELL CLEVELAND, Jr.

Education, HERBERT A. SMITH.

Printing, QUINCY R. CRAFT.

### PUBLICATIONS IN NOVEMBER.

Bulletin 71.—Rules and Specifications for the Grading of Lumber.

Circular 48.—Kiln Drying Hardwood Lumber.

Circular 49.—Timber used in the Mines of the United States in 1905.

Press Bulletin 141.—Prolonging the Life of Mine Props.

### PROJECTS.

#### New England—

Location and care of permanent sample plats; preparation of report—W. D. STERRETT, Washington, D. C.



**RECORD.**

**JAMES B. ADAMS**, Special Fiscal Agent, in Charge.

Maintenance, **GEO. G. ANDERSON**.

Accounts, **GEO. E. KING**.

Purchase, **HARRY C. TOWERS**.

**GRAZING.**

**A. F. POTTER**, Inspector of Grazing, in Charge.

Inspection, { **C. H. ADAMS**, Helena, Mont.  
**W. C. CLOS**, Provo, Utah.  
**J. T. WEDEMYER**, Silver City, N. Mex.

**RESERVE ORGANIZATION.**

**R. E. BENEDICT**, Forest Inspector, in Charge.

**FOREST RESERVES.****NORTHERN DISTRICT.**

**JOHN H. HATTON**, Forest Inspector, in Charge.

**IDAHO.**

Bear River Forest Reserve—**J. F. SQUIRES**, Forest Supervisor, Logan, Utah.

Bitter Root Forest Reserve—**CASSIUS M. DAY**, Forest Supervisor, Kooskia.

Cassia Forest Reserve—**P. T. WRENSTED**, Forest Supervisor, Pocatello.

Henrys Lake Forest Reserve—**HOMER E. FENN**, Forest Supervisor, St. Anthony; **J. F. BRUINS**, Forest Assistant, St. Anthony.

Payette Forest Reserve—**F. A. FENN**, Forest Supervisor, Boise; **C. E. DUNSTON**, Forest Assistant, Boise.

Pocatello Forest Reserve—**P. T. WRENSTED**, Forest Supervisor, Pocatello.

Priest River Forest Reserve—**B. F. McCONNELL**, Forest Supervisor, Priest River; **R. L. FROMME**, Forest Assistant, Priest River.

Sawtooth Forest Reserve—**F. A. FENN**, Forest Supervisor, Boise; **C. E. DUNSTON**, Forest Assistant, Boise.

Weiser Forest Reserve—**JOHN B. LAFFERTY**, Forest Supervisor, Weiser; **G. E. CLEMENT**, Forest Assistant, Weiser.

**MINNESOTA.**

Minnesota Forest Reserve—**G. E. MARSHALL**, Assistant Lumberman in Charge, Cass Lake.

**MONTANA.**

Big Belt Forest Reserve—**ROBERT J. MOORE**, Forest Ranger in Charge, Townsend; **M. N. STICKNEY**, Forest Assistant, Helena.

Big Hole Forest Reserve (Northern Division)—**E. A. SHERMAN**, Forest Supervisor, Missoula.

Big Hole Forest Reserve (Southern Division)—**J. B. SEELEY**, Forest Supervisor, Sheridan, Wyo.

Bitter Root Forest Reserve (Montana Division)—**E. A. SHERMAN**, Forest Supervisor, Missoula; **W. W. WHITE**, Forest Assistant, Missoula.

- Crazy Mountains Forest Reserve—E. C. RUSSELL, Livingston.
- Ekalaka Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.
- Elkhorn Forest Reserve—ROBERT J. MOORE, Forest Ranger in Charge, Townsend; M. N. STICKNEY, Forest Assistant, Helena.
- Helena Forest Reserve—DWIGHT BUSHNELL, Forest Supervisor, Helena; M. N. STICKNEY, Forest Assistant, Helena.
- Gallatin Forest Reserve—DAVID CONKLING, Forest Supervisor, Bozeman; DORR SKEELS, Forest Assistant, Bozeman.
- Hell Gate Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula; W. W. WHITE, Forest Assistant, Missoula.
- Highwood Mountains Forest Reserve—JAMES G. THAIN, Forest Supervisor, Highwood.
- Lewis and Clark Forest Reserve (Northern Division)—F. N. HAINES, Forest Supervisor, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.
- Lewis and Clark Forest Reserve (Southern Division)—PAGE S. BUNKER, Forest Ranger in Charge, Kalispell; D. G. KINNEY, Forest Assistant, Kalispell.
- Little Belt Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart.
- Lolo Forest Reserve—E. A. SHERMAN, Forest Supervisor, Missoula.
- Long Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood, S. Dak.
- Madison Forest Reserve—J. B. SEELY, Forest Supervisor, Virginia City.
- Pryor Mountains Forest Reserve—W. H. PEARCE, Forest Supervisor, Wapiti.
- Snowy Mountains Forest Reserve—IRA E. TODD, Forest Supervisor, Neihart.
- Yellowstone Forest Reserve (Absaroka Division)—E. C. RUSSELL, Forest Supervisor, Livingston; BERT P. KIRKLAND, Forest Assistant.

#### SOUTH DAKOTA.

- Black Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood; R. P. IMES, Assistant Forest Inspector, Deadwood.
- Cave Hills Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.
- Short Pine Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.
- Slim Buttes Forest Reserve—J. F. SMITH, Forest Supervisor, Deadwood.

#### WYOMING.

- Big Horn Forest Reserve—W. E. JACKSON, Forest Supervisor, Bighorn; P. T. COOLIDGE, Forest Assistant, Bighorn.
- Medicine Bow Forest Reserve (Wyoming)—L. G. DAVIS, Forest Supervisor, Saratoga; C. G. SMITH, Forest Assistant, Saratoga; JAMES BLACKHALL, Forest Ranger, Saratoga.
- Sierra Madre Forest Reserve—L. G. DAVIS, Forest Supervisor, Saratoga; C. G. SMITH, Forest Assistant, Saratoga.
- Yellowstone Forest Reserve (Wind River Division)—ZEPH JONES, Forest Supervisor, Pinedale; G. H. CECIL, Forest Assistant, Wapiti.
- Yellowstone Forest Reserve (Teton Division)—ROBERT E. MILLER, Forest Supervisor, Jackson; CLARENCE N. WOODS, Forest Ranger, Jackson.
- Yellowstone Forest Reserve (Shoshone Division)—W. H. PEARCE, Forest Supervisor, Wapiti; G. H. CECIL, Forest Assistant, Wapiti; HARRY THURSTON, Forest Ranger, Marquette.

#### SOUTHERN DISTRICT.

F. S. BREEN, Forest Supervisor, in Charge.

#### ARIZONA.

- Black Mesa Forest Reserve—T. S. WOOLSEY, Acting Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.



Chiricahua Forest Reserve—C. T. McGLONE, Forest Supervisor, Paradise; H. D. BURRALL, Forest Assistant, Paradise.

Grand Canyon Forest Reserve (Northern Division)—LORUM PRATT, Forest Supervisor, Fredonia.

Grand Canyon Forest Reserve (Southern Division)—T. S. WOOLSEY, Acting Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff; PATRICK A. FENTON, Forest Ranger, Grand Canyon.

Huachuca Forest Reserve—ROBERT J. SELKIRK, Forest Ranger in Charge.

Mount Graham Forest Reserve—H. A. E. MARSHALL, Forest Supervisor, Safford.

Pinal Mountains Forest Reserve—H. A. E. MARSHALL, Forest Supervisor, Globe.

Prescott Forest Reserve—F. C. W. POOLER, Forest Supervisor, Prescott.

San Francisco Mountains Forest Reserve—T. S. WOOLSEY, Acting Forest Supervisor, Flagstaff; J. H. ALLISON, Forest Assistant, Flagstaff.

Santa Rita Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.

Santa Catalina Forest Reserve—T. F. MEAGHER, Forest Supervisor, Tucson; H. D. BURRALL, Forest Assistant, Paradise.

Tonto Forest Reserve—W. H. REED, Forest Supervisor, Roosevelt.

#### COLORADO.

Battlement Mesa Forest Reserve—DAVID ANDERSON, Forest Ranger in Charge, Collbran.

Cochetopa Forest Reserve—R. W. SHELLABARGER, Forest Supervisor, Moffatt.

Fruita Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Gunnison Forest Reserve—WM. R. KREUTZER, Forest Ranger in Charge, Gunnison.

Holy Cross Forest Reserve—HARRY H. FRENCH, Forest Ranger in Charge, Glenwood Springs; F. H. MORRILL, Forest Assistant, Glenwood Springs.

Leadville Forest Reserve—L. A. STROUP, Forest Supervisor, Leadville; J. H. RAMSKILL, Forest Assistant, Leadville.

Medicine Bow Forest Reserve (Colorado Division)—SHEP N. HUSTED, Forest Supervisor, Fort Collins.

Montezuma Forest Reserve—H. N. WHEELER, Forest Supervisor, Durango.

Park Range Forest Reserve—THOMAS HOGAN, Forest Ranger in Charge, Kremmling.

Pikes Peak Forest Reserve—MARK A. WOODRUFF, Forest Supervisor, Denver; T. D. WOODBURY, Forest Assistant, Denver; F. D. WHITNEY, Forest Ranger, Florissant.

San Isabel Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

San Juan Forest Reserve—F. C. SPENCER, Forest Supervisor, Monte Vista; W. J. MORRILL, Forest Assistant, Monte Vista.

Uncompahgre Forest Reserve—H. K. PORTER, Forest Supervisor, Delta.

Wet Mountains Forest Reserve—EUGENE WILLIAMS, Forest Supervisor, Westcliffe.

White River Forest Reserve—JAMES A. BLAIR, Forest Supervisor, Meeker.

#### KANSAS.

Garden City Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey, Nebr.

## NEBRASKA.

Niobrara Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

Dismal River Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

North Platte Forest Reserve—C. A. SCOTT, Forest Assistant in Charge, Halsey.

## NEW MEXICO.

Gila Forest Reserve—R. C. McCLURE, Forest Supervisor, Silver City; A. O. WAHA, Forest Assistant, Silver City; M. SMITH, Forest Assistant, Silver City.

Jemez Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Lincoln Forest Reserve—JOHN KERR, Forest Supervisor, Capitan.

Pecos River Forest Reserve—L. F. KNEIPP, Forest Supervisor, Santa Fe; A. D. READ, Forest Assistant, Santa Fe.

Portales Forest Reserve—A. L. CHESHER, Forest Ranger in Charge, Portales.

## OKLAHOMA.

Wichita Forest Reserve—E. F. MORRISSEY, Forest Supervisor, Cache.

## UTAH.

Aquarius Forest Reserve—GEO. H. BARNEY, Forest Supervisor, Escalante.

Beaver Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.

Dixie Forest Reserve—TIMOTHY C. HOYT, Forest Supervisor, Parowan.

Fillmore Forest Reserve—WILLIAM HURST, Forest Supervisor, Beaver.

Fish Lake Forest Reserve—N. E. SNELL, Forest Ranger in Charge, Salina.

Grantsville Forest Reserve—CHARLES F. COOLEY, Forest Supervisor, Grantsville.

La Sal Forest Reserve—ORRIN C. SNOW, Forest Ranger in Charge, Moab.

Manti Forest Reserve—A. W. JENSEN, Forest Supervisor, Ephraim.

Payson Forest Reserve—DAN S. PACK, Forest Supervisor, Payson.

Salt Lake Forest Reserve—E. H. CLARKE, Forest Supervisor, Murray.

Sevier Forest Reserve—TIMOTHY C. HOYT, Forest Ranger in Charge, Parowan.

Uinta Forest Reserve—WILLARD I. PACK, Forest Supervisor, Provo; D. S. MARSHALL, W. JONES BOWEN, Deputy Forest Supervisors, Provo; H. F. STUDLEY, Forest Assistant, Provo; WM. A. ANDERSON, JOHN A. PACK, Forest Rangers.

Wasatch Forest Reserve—E. H. CLARKE, Forest Supervisor, Murray.

## WESTERN DISTRICT.

K. W. WOODWARD, Assistant Forest Inspector, in Charge.

## ALASKA.

Alexander Archipelago and Afognak forest reserves—W. A. LANGILLE, Forest Inspector in charge of reserves in Alaska, Ketchikan.

## CALIFORNIA.

Diamond Mountain Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

Klamath Forest Reserve—R. L. P. BIGELOW, Forest Supervisor, Yreka; C. J. BUCK, Forest Assistant, Yreka.



Lassen Peak Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy; JOSEPH C. LA PLANT, Forest Ranger, Burney.

Modoc Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

Plumas Forest Reserve—L. A. BARRETT, Forest Supervisor, Quincy; A. R. POWERS, Forest Assistant, Quincy.

San Bernardino Forest Reserve—R. H. CHARLTON, Forest Supervisor, Los Angeles; NELS O. TORSTENSON, Forest Ranger, San Bernardino.

San Gabriel Forest Reserve—R. H. CHARLTON, Forest Supervisor, Los Angeles; B. H. CROW, Forest Ranger, Pasadena.

San Jacinto Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.

Santa Barbara Forest Reserve—W. M. SLOSSON, Forest Supervisor, Santa Barbara; J. REBMANN, Forest Assistant, Santa Barbara; STEPHEN H. DOUGLASS, Forest Ranger, Ventura.

Shasta Forest Reserve—G. A. COLEMAN, Forest Supervisor, Sisson; R. C. HACKLEY, Forest Assistant, Sisson.

Sierra Forest Reserve (Northern Division)—C. H. SHINN, Forest Supervisor, Northfork; ERNEST BRITTEN, Forest Ranger, Three Rivers.

Sierra Forest Reserve (Southern Division)—W. B. GREELEY, Forest Supervisor, Hot Springs, Tulare County.

Stanislaus Forest Reserve—S. L. N. ELLIS, Forest Supervisor, Sonora.

Tahoe Forest Reserve—MADISON B. ELLIOTT, Forest Supervisor, Nevada City; M. B. PRATT, Forest Assistant, Nevada City; JNO. C. WELLS, Forest Ranger, Nevada City.

Trabuco Canyon Forest Reserve—J. R. BELL, Forest Supervisor, Hemet.

Trinity Forest Reserve—E. S. MAINWARING, Forest Supervisor, Weaverville; F. H. HAFLEY, Deputy Forest Supervisor, Weaverville; C. J. BUCK, Forest Assistant, Yreka.

Warner Mountains Forest Reserve—A. H. HOGUE, Forest Supervisor, Alturas.

#### NEVADA.

Charleston Forest Reserve—DAVID BARNETT, Forest Ranger in Charge, Las Vegas, N. Mex.; O. S. MARSHALL, Deputy Forest Supervisor, Las Vegas, N. Mex.

#### OREGON.

Ashland Forest Reserve—S. C. BARTRUM, Forest Supervisor, Roseburg.

Blue Mountains Forest Reserve (Western Division)—A. S. IRELAND, Forest Supervisor, Prineville; HENRY IRELAND, Deputy Forest Ranger, Prineville.

Blue Mountains Forest Reserve (Eastern Division)—S. S. TERRELL, Forest Supervisor, D. B. SELLER, Forest Superintendent, Sumpter.

Bull Run Forest Reserve—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland.

Cascade Forest Reserve (Northern Division)—D. D. BRONSON, Forest Inspector in Charge, Portland; A. E. COHOON, Forest Assistant, Portland; MILTON J. ANDERSON, Forest Ranger, The Dalles.

Cascade Forest Reserve (Southern Division)—S. C. BARTRUM, Forest Supervisor, Roseburg.

Chesnimnus Forest Reserve—H. K. O'BRIEN, Forest Supervisor, Wallowa.

Maury Mountains Forest Reserve—A. S. IRELAND, Forest Supervisor, Prineville.

Wallowa Forest Reserve—H. K. O'BRIEN, Forest Supervisor, Wallowa.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Supervisor, Walla Walla, Wash.

## WASHINGTON.

Mount Rainier Forest Reserve—G. F. ALLEN, Forest Supervisor, Orting; C. H. FLORY, Forest Assistant, Orting.

Olympic Forest Reserve—FRED HANSON, Forest Supervisor, Hoodspport.

Wenaha Forest Reserve—J. M. SCHMITZ, Forest Supervisor, Walla Walla.

Washington Forest Reserve (Western Division)—G. B. COLEMAN, Forest Supervisor, Sumas.

Washington Forest Reserve (Eastern Division)—G. W. MILHAM, Forest Supervisor, Chelan.

**Reserve Boundaries, W. T. Cox.**

*Compilation, H. J. TOMPKINS.*

**PROJECTS.**

Examination of proposed reserves and additions to and eliminations from existing reserves, and examinations of agricultural land in Forest Reserves under act of June 11, 1906—W. H. B. KENT, in Charge, Albany Hotel, Denver, Colo.:

**Arizona—**

STANTON G. SMITH and JOHN W. FARMER, Flagstaff.

**Colorado—**

W. J. MORRILL, Monte Vista, and E. W. SHAW, Moffat.

**Hawaii—**

R. S. HOSMER, Honolulu.

**Idaho—**

CLYDE LEAVITT and JOHN H. CLARK, Boise.

**Montana—**

R. V. R. REYNOLDS, Washington, D. C.

**New Mexico—**

H. O. STABLER, Santa Fe.

**Oregon—**

R. B. WILSON, 631 Hoyt street, Portland; L. VON WERNSTED, Canyon City.

**Washington—**

R. W. AYRES and A. C. RINGLAND, Tacoma Hotel, Tacoma; LEE HARRIS, Chelan.

Survey of boundaries of existing reserves:

**California—**

F. E. JOY, Sisson.



## SERVICE CHANGES IN NOVEMBER.

### APPOINTED.

#### Law—

BERNARD A. GOW, Clerk, at \$1,600 per annum.

#### Forest Products—

W. E. HERRING, Constructing Engineer, at \$2,000 per annum.

#### Grazing—

MISS LILLIE V. IMHOFF, Clerk, at \$600 per annum.

#### Record—

MISS MABEL BERRY, Clerk, at \$600 per annum.

MISS E. G. IRVING, Clerk, at \$600 per annum.

JOHN W. STACK, Messenger, at \$600 per annum.

MISS E. T. KEATING, Clerk, at \$480 per annum.

MISS CORNELIA GLASE, Clerk, at \$480 per annum.

FRED MUNCHMEYER, Messenger, at \$360 per annum.

#### Reserve Organization—

L. A. KLING, Deputy Forest Supervisor, Lassen Peak Forest Reserve, California; \$1,200 per annum.

DAVID BARNETT, Forest Ranger, at \$1,200 per annum, Charleston Forest Reserve, Nevada.

The following forest guards were appointed assistant forest rangers, at \$900 per annum, upon certification by the Civil Service Commission:

THOMAS B. RUTH, WILLIAM H. ROPER, Black Mesa Forest Reserve, Arizona.

JAMES F. RICHARDSON, HARRY H. CHIVINGTON, FRANK HELFRICH, Shasta Forest Reserve, California.

EDWARD E. JONES, EVAN E. KELLY, Tahoe Forest Reserve, California.

JOHN E. ALVERSON, MAURICE L. PEASE, HORACE W. CRANDELL, Jr., LEWIS H. ANDERSON, San Bernardino Forest Reserve, California.

WILLIAM B. RIDER, ALBERT W. LEWIS, WILLIAM H. HOTELLING, FRANCIS P. MCCARTHY, Klamath Forest Reserve, California.

NEWTON G. BELLAIRS, GEORGE W. BROADHURST, FRANK W. PENNOCK, ALBERT W. WALKER, ERLE W. SCOTT, Medicine Bow Forest Reserve (Wyoming Division), Wyoming.

GEORGE W. BOOKER, WILLIAM J. BARR, Yellowstone Forest Reserve (Teton Division), Wyoming.

GEORGE HOLLISTER, RAY MURRAY, WILLIAM W. GIBBONS, GEORGE CAVIN, EDWARD K. STRONG, WILLIAM H. THROWER, H. H. PEREGOV, Sierra Forest Reserve (North), California.

JOHN R. HUGHES, TOM O. MAY, Battlement Mesa Forest Reserve, Colorado.

EDWARD N. VANCE, ROBERT W. McDONALD, Gunnison Forest Reserve, Colorado.

NORMAN S. ASHLOCK, WILLIAM S. CYPHERS, Holy Cross Forest Reserve, Colorado.

OTTO W. HOEGER, THOMAS T. DINSMORE, NEWTON GARNER, JOSEPH J. LIBEU, Santa Barbara Forest Reserve, California.

MERRITT A. WICKERSHAM, DAVID H. KERBY, CARL K. HJORT, CHARLES T. GRAY, HENRY A. BERGH, JOHN F. HILT, COIT E. HERRICK, FRANK L. RINEARSON, Sawtooth Forest Reserve, Idaho.

JAMES D. BAILEY, REUBEN L. NEILL, WILLIAM A. CAMPBELL, San Francisco Mountains Forest Reserve, Arizona.

THOMAS C. SPAULDING, JOHN D. JONES, HARRY N. MORGAN, Hell Gate Forest Reserve, Montana.

ALBERT A. HARDY, FRANK W. THOMAS, IRVING P. SNELL, J. CARL ALLRED, Uinta Forest Reserve, Utah.

WALTER F. BROUGH, Payson Forest Reserve, Utah.

CYRUS P. SNELL, Salt Lake Forest Reserve, Utah.

GRAFTON E. JOHNSON, JOHN L. WOODEN, WALTER M. CAMPBELL, Weiser Forest Reserve, Idaho.

HARRY L. CASTLE, JULIAN M. JOURNIGAN, Tonto Forest Reserve, Arizona.

JAMES O. BUCHHOLZ, EDWARD N. KAVANAGH, SAMUEL H. CLAY, ERNEST C. BUNKER, Leadville Forest Reserve, Colorado.

ARTHUR H. ZACHAU, CHARLES H. HINDERER, ROSCOE G. WILLSON, Prescott Forest Reserve, Arizona.

FRANK THOMPSON, STEPHEN TRATHEN, WILLIAM WIEHE, WALTER DONALDSON, Black Hills Forest Reserve, South Dakota.

SAMUEL H. COLMAN, J. H. RATLIFF, ALBERT WHITNEY, H. P. HURD, Park Range Forest Reserve, Colorado.

W. J. BROWN, J. W. LEEPER, Sierra Forest Reserve (South), California.

PHILIP JAGELS, LUTHER F. POLLOCK, KENNETH C. SOOYSMITH, JOSEPH W. REID, Gila River Forest Reserve, New Mexico.

ALBERT ABBOTT, HUGH H. HARRIS, JAMES C. DEXTER, CARROLL R. DWIRE, CHARLES H. BERRY, LEWIS J. MUNDELL, Jemez Forest Reserve, New Mexico.

THOMAS N. REYNOLDS, GEORGE A. VILES, Pecos River Forest Reserve, New Mexico.

THOMAS E. JACQUES, Uncompahgre Forest Reserve, Colorado.

TIBO GALLIGES, Cochetopa Forest Reserve, Colorado.

JOHN BARNARD, Fish Lake Forest Reserve, Utah.

HYRUM O. ROSE, Bear River Forest Reserve, Utah and Idaho.

CALVIN H. HUFF, Priest River Forest Reserve, Idaho.

JOHN B. PESTONI, Stanislaus Forest Reserve, California.

JAMES F. WESTFALL, Santa Catalina Forest Reserve, Arizona.

HUGH M. GUTHRIE, Cascade Forest Reserve (North), Oregon.

JAMES D. MCCALL, Payette Forest Reserve, Idaho.

CHARLES J. BAYER, Yellowstone Forest Reserve (Wind River Division), Wyoming.

ROSCOE J. BROWN, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

THOMAS P. MACKENZIE, Wenaha Forest Reserve, Washington.

RAYMOND A. BOWEN, Pikes Peak Forest Reserve, Colorado.

JOHN SHIELDS, White River Forest Reserve, Colorado.

J. MILTON SULLENS, Blue Mountains Forest Reserve (East), Oregon.

LEWIS A. SWALLOW, San Isabel Forest Reserve, Colorado.

CHARLES E. JARVIS, Lolo Forest Reserve, Montana.

CHARLES G. Y. HIGGINS, Dixie Forest Reserve, Utah.

JOHN P. BROCKBANK, Manti Forest Reserve, Utah.

WILLIAM H. RIDDLE, Sevier Forest Reserve, Utah.

EDWIN W. HUNNICUTT, Henrys Lake Forest Reserve, Idaho.

JOSIAH SHURTZ, Aquarius Forest Reserve, Utah.

HEPLER B. SHOCKLEY, Niobrara Forest Reserve, Nebraska.



The following persons were appointed forest guards at \$720 per annum :

GEORGE PRATT, RUTLEDGE PARKER, San Francisco Mountains Forest Reserve, Arizona.

EDGAR PARKER, Wichita Forest Reserve, Oklahoma.

### PROMOTED.

#### Forest Products—

C. G. CRAWFORD, from Forest Inspector at \$1,800 per annum to Forest Inspector at \$2,500 per annum.

#### Record—

Miss MARIE SIMONSON, Clerk, from \$480 per annum to \$600 per annum.

#### Reserve Organization—

T. S. WOOLSEY, Jr., from Forest Assistant to Assistant Forest Inspector.

TIMOTHY C. HOYT, from Ranger in Charge to Forest Supervisor, Sevier Forest Reserve, Utah.

SHEP N. HUSTED, from Ranger in Charge to Forest Supervisor, Medicine Bow Forest Reserve (Colorado Division), Colorado.

J. B. LAFFERTY, from Ranger in Charge to Forest Supervisor, Weiser, Forest Reserve, Idaho.

PAGE S. BUNKER, Ranger in Charge to Forest Supervisor, Lewis and Clark Forest Reserve (South), Montana.

HARRY FRENCH, Ranger in Charge to Forest Supervisor, Holy Cross Forest Reserve, Colorado.

HOMER E. FENN, Ranger in Charge to Forest Supervisor, Henrys Lake Forest Reserve, Idaho.

JAMES A. BLAIR, from Ranger in Charge of the Leadville Forest Reserve to Forest Supervisor of the White River Forest Reserve, Colorado.

E. S. MAINWARING, Ranger in Charge to Forest Supervisor, Trinity Forest Reserve, California.

NATHAN E. SNELL, from Assistant Forest Ranger at \$900 per annum to Ranger in Charge at \$1,400 per annum, Fish Lake Forest Reserve, Utah.

ROBERT J. SELKIRK, from Assistant Forest Ranger on the Santa Rita Forest Reserve, New Mexico, at \$600 per annum, to Forest Ranger in Charge of the Huachuca Forest Reserve, Arizona, at \$1,200 per annum.

JOHN H. HUFF, to Assistant Forest Ranger at \$900 per annum, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

HOWARD K. O'BRIEN, Forest Ranger at \$1,000 per annum to Forest Supervisor at \$1,500 per annum, Wallowa and Chesnimnus forest reserves, Oregon.

CHAS. H. ANDERSON, from Assistant Forest Ranger at \$840 per annum to Assistant Forest Ranger at \$900 per annum, Yellowstone Forest Reserve (Shoshone Division), Wyoming.

WARREN H. RUTLEDGE, from Assistant Forest Ranger at \$900 per annum to Deputy Forest Ranger at \$1,100 per annum, Medicine Bow Forest Reserve (Colorado Division), Colorado.

ROWLAND W. BROWN, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Yellowstone Forest Reserve (Teton Division), Wyoming.

JOHN GRAHAM, Jr., from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Yellowstone Forest Reserve (Teton Division), Wyoming.

EDSON T. BUKER, from Assistant Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Hell Gate Forest Reserve, Montana.

DEXTER B. REYNOLDS, from Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Big Belt Forest Reserve, Montana.

THEODORE CHRISTIANSEN, from Assistant Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Lewis and Clark Forest Reserve (North), Montana.

JOHN K. WHITING, from Assistant Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, White River Forest Reserve, Colorado.

PARLEY MADSEN, from Assistant Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Uinta Forest Reserve, Utah.

WALTER K. ROBINSON, from Assistant Forest Ranger at \$720 per annum to Assistant Forest Ranger at \$900 per annum, Trabuco Canyon Forest Reserve, California.

#### SEPARATED.

#### Publication and Education—

To take effect November 30: W. HOYT WEBER, JOHN BENTLEY, Jr., and HOWARD B. OAKLEAF.

#### Reserve Organization—

(Forest Guards are separated, not furloughed, when their services are no longer needed.)

The following Forest Guards have been separated from the Service:

J. D. MCGEE, V. H. LINDSAY, Mount Rainier Forest Reserve, Washington.

F. E. RICE, J. W. LEEPER, D. W. HILLEBRAND, W. J. BROWN, J. F. SWANK, H. C. YOUNG, Sierra Forest Reserve (South), California.

WILLIAM G. NEFF, MARTIN S. DURBIN, F. L. EARHART, GEORGE A. BONEBRAKE, Cascade Forest Reserve (South), Oregon.

BERT BILLS, ARDEN C. BIGGERSTAFF, HECTOR S. ERWIN, Weiser Forest Reserve, Idaho.

BENJ. F. SHELLIEDY, HUGH S. DEPLER, Battlement Mesa Forest Reserve, Colorado.

F. MCCARN, W. A. MERRILL, WALTER S. BARTON, HARRY HAWKINS, C. W. TOWLE, HARRY KRUGER, Tahoe Forest Reserve, California.

OTIS H. ANDERSON, NOAH W. WALLACE, Klamath Forest Reserve, California.

JAMES WIGHT, CHARLES CALLAHAN, WILLIAM GARSEES, MARVIN ELLIS, Stanislaus Forest Reserve, California.

P. S. PRICE, C. F. SULLIVAN, Shasta Forest Reserve, California.

EARL SALISBURY, P. L. GOOLDY, HARRY CRISWELL, Park Range Forest Reserve, Colorado.

FOREST F. HARBON, HUGH S. McELROY, Lewis and Clark Forest Reserve (South), Montana.

JAMES STEELE, Sevier Forest Reserve, Utah.

JOSEPH M. BOULTER, Yellowstone Forest Reserve (Wind River Division), Wyoming.

ARTHUR C. BARRETT, Plumas Forest Reserve, California.

MOSES KINNEN, Wenaha Forest Reserve, Washington.

CALVIN BUSHBY, Blue Mountain Forest Reserve (East), Oregon.

ALBERT C. MEEK, Lincoln Forest Reserve, New Mexico.

CHARLES R. EDISON, Henrys Lake Forest Reserve, Idaho.

AARON SNYDER, Cascade Forest Reserve (North), Oregon.

LOUIS CUTLER, Grand Canyon Forest Reserve (North), Arizona.

GEORGE F. NELSON, Sawtooth Forest Reserve, Idaho.

L. C. WALKER, E. J. REDINGTON, Tahoe Forest Reserve, California.



**FURLOUGHED.****Forest Extension—**

GEORGE L. CLOTHIER, Assistant Forest Inspector.

**Reserve Organization—**

R. C. HACKLEY, Forest Assistant, Shasta Forest Reserve, California.

E. J. WIGAL, HOMER ROSS, Assistant Forest Rangers, Mount Rainier Forest Reserve, Washington.

HENRY ALBRECHT, OLUF NIELSON, JOHN BARNARD, WILFORD PACE, Assistant Forest Rangers, Fish Lake Forest Reserve, Utah.

J. ROY HARVEY, SILAS L. MCKEE, W. J. NICHOLS, R. J. WATSON, C. V. ODEN, Assistant Forest Rangers, Cascade Forest Reserve (South), Oregon.

H. O. GARRISON, C. W. FRYE, Forest Rangers, Sierra Forest Reserve (South), California.

ROBERT PEMBLE, Assistant Forest Ranger, Yellowstone Forest Reserve (Teton Division), Wyoming.

GEORGE F. HARRIS, Assistant Forest Ranger, Black Hills Forest Reserve, South Dakota.

FRED K. WYMAN, Assistant Forest Ranger, Lewis and Clark Forest Reserve (South), Montana.

JAMES STOUT, Assistant Forest Ranger, Tahoe Forest Reserve, California.

JOHN B. PESTONI, Assistant Forest Ranger, Stanislaus Forest Reserve, California.

N. L. SHEFFIELD, Assistant Forest Ranger, Dixie Forest Reserve, Utah.

THOMAS F. HOWELL, Assistant Forest Ranger, Lassen Peak Forest Reserve, California.

J. O. STINER, Assistant Forest Ranger, Warner Mountains Forest Reserve, California.

GEORGE W. CHAMBERLAIN, Assistant Forest Ranger, Plumas Forest Reserve, California.

DANIEL J. DUNHAM, Assistant Forest Ranger, Bitter Root Forest Reserve, Idaho.

JOHN W. McLAIN, Deputy Forest Ranger, San Francisco Mountains Forest Reserve, Arizona.

**RESTORED FROM FURLOUGH.****Reserve Organization—**

GEORGE H. MULLISON, Assistant Forest Ranger, Medicine Bow Forest Reserve (Wyoming Division), Wyoming.

LOUIS BUSHY, Deputy Forest Ranger, Pikes Peak Forest Reserve, Colorado.

NATHAN SNELL, Assistant Forest Ranger, Uinta Forest Reserve, Utah.

GEORGE SIEBENTRITT, Assistant Forest Ranger, Gallatin Forest Reserve, Montana.

**TRANSFERRED.****Publication and Education—**

GEORGE E. SAWYER, Forest Student; transferred from this Office to the Office of Forest Management.

**Forest Extension—**

E. B. FROTHINGHAM and A. E. OMAN, Forest Assistants; transferred from this Office to the Office of Forest Products.

**Reserve Organization—**

W. B. GREELEY, Forest Inspector, Forest Management, to Forest Supervisor, Reserve Organization.

WALTER J. MORRILL, Forest Assistant, from San Juan Forest Reserve, Colorado, to Reserve Boundaries.

ERNEST W. SHAW, Assistant Forest Ranger, from San Juan Forest Reserve, Colorado, to Reserve Boundaries.

P. D. KELLETER, Forest Assistant, from Forest Management to Reserve Boundaries.

R. J. BROWN, Assistant Forest Ranger, from Yellowstone Forest Reserve (Shoshone Division), Wyoming, to Forest Products.

HARRY GIBLER, from Ranger in Charge White River Reserve, Colorado, to Forest Ranger, Park Range Forest Reserve, Colorado.

CLAUDE THOMPSON, Assistant Forest Ranger, from Sierra Forest Reserve (North), California, to San Francisco Mountains Forest Reserve, Arizona.

JAMES A. BLAIR, from Ranger in Charge of Leadville Forest Reserve, Colorado, to Forest Supervisor of White River Forest Reserve, Colorado.

JOHN W. FARMER, Forest Supervisor, from Reserve Organization to Reserve Boundaries.

#### RESIGNED.

##### Reserve Organization—

HENRY O. GARRISON, Assistant Forest Ranger, Sierra Forest Reserve (South), California.

HARRISON WHITE, Forest Supervisor, Sierra Forest Reserve (South), California.

ALBERT E. RAE, JOHN G. TURNBOW, Assistant Forest Rangers, Uinta Forest Reserve, Utah.

FRED G. COOPER, Forest Guard, Leadville Forest Reserve, Colorado.

VOLNEY J. DAWSON, Forest Guard, Blue Mountains Forest Reserve (East), Oregon.

BERRY S. WITTER, Forest Guard, San Jacinto Forest Reserve, California.

FRANK B. NOTESTEIN, Forest Guard, San Juan Forest Reserve, Colorado.

THOMAS J. ORR, Jr., Assistant Forest Ranger, Yellowstone Forest Reserve (Absaroka Division), Montana.

OSCAR LAMB, Forest Guard, Sevier Forest Reserve, Utah.

CLAYTON SIMONS, Forest Guard, Cascade Forest Reserve (North), Oregon.

JOHN W. COLLINS, Assistant Forest Ranger, Madison Forest Reserve, Montana.

IRA E. SPENCER, Assistant Forest Ranger, Mount Rainier Forest Reserve, Washington.

NORMAN MAPES, Forest Guard, Shasta Forest Reserve, California.

JAY BUNTING, Assistant Forest Ranger, Black Hills Forest Reserve, South Dakota.

ALVA L. KEELER, Forest Guard, Wallowa Forest Reserve, Oregon.

BREWER A. COLBURN, Assistant Forest Ranger, Sierra Forest Reserve (South), California.

#### SUSPENDED.

##### Reserve Organization—

BENJAMIN MATTICE, Assistant Forest Ranger, Santa Catalina Forest Reserve, Arizona.

#### DISMISSED FROM THE SERVICE.

##### Reserve Organization—

HARRY H. ELLISON, Forest Guard, Shasta Forest Reserve, California.



## SERVICE NOTES FOR DECEMBER, 1906.

### LAW.

#### Claims.

The investigation of alleged illegal mining claims will be extended to the Prescott Reserve, Arizona, during the month of December. The work will be performed by Geologists L. G. Gillett, W. L. Walker, and S. H. Ball. They will probably examine claims of like character in the Lincoln Reserve, New Mexico, after concluding work in the Prescott.

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#### Trespass.

The Forester has directed the supervisor of the Tahoe Forest Reserve, Cal., to seize any timber cut from the vacant odd sections of land returned as mineral by the survey, within 10 miles of the line of the Central Pacific Railroad.

This timber was originally granted to the railroad company by the acts of July 1, 1862, and July 2, 1864, and the Forester held, as a basis for his directions to the supervisor, that the failure of the railroad company to remove the timber within a reasonable time terminated its rights, since it could not be presumed that Congress intended to grant to the railroad company a perpetual easement in the land for the purpose of growing timber.

This decision will apply to timber on mineral odd sections within the 10-mile limit of the Central Pacific and Union Pacific railroads.

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The Attorney-General has been requested to begin suits in the following cases: Orenshaw, saloon, Alexander Archipelago Reserve; Thomas Shannon, contempt proceedings to punish for violation of injunction, Little Belt Reserve; Merin Marshall, fire, Weiser Reserve.

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In the case of J. H. Schworer, privilege trespasser in the Bitter Root Reserve, the Forester rejected the application of a defiant trespasser for the classification, listing, and opening to homestead entry under the act of June 11, 1906, of land held by him in trespass.

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Simon Romero was arrested on October 28 for grazing trespass on the Jemez Reserve and held in default of bail in the sum of \$250. On November 21 Romero's offer of \$108.15, in settlement of the civil damages, was accepted.

In the following cases offers of settlement for the civil damages have been accepted: M. H. Knapp, ejectment, Blue Mountains Reserve; Benton R.

Bailey, timber trespass, Klamath Reserve; Alta Russell and John Russell, timber trespass, Mount Rainier Reserve; Andrew Norrell, grazing trespass, Park Range Reserve.

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### Privileges.

The following special privilege permits for power-developing projects were issued by the Forester between October 15 and November 15:

Stanislaus Electric Power Company: Dam, conduit, and power house on Deadman Creek; dam, conduit, and power house on Upper Stanislaus River; dam and reservoir on Relief Creek; dams and reservoir at Kennedy's Meadow, on the Stanislaus River; a wagon road and camp site to be used in the construction work carried on by the company; all in the Stanislaus Reserve, California.

Nevada Power Mining and Milling Company: Reservoir and pipe line in the Northern Division of the Sierra Reserve, California.

Tuolumne Electric Company: Alpine, Tamarack, and Las Vegas reservoirs, together with a camp site to be used in construction work in the Stanislaus Reserve, California.

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The following right-of-way cases, referred from the Department of the Interior to the Forester for report, as to whether the projects would interfere with forest-reserve interests, were returned to that Department between October 15 and November 15 with favorable reports by the Forester:

Harry Hale and G. A. Pulver, reservoir, Battlement Mesa Reserve, Colorado; Mesa Creek Reservoir and Canal Company, reservoir, Battlement Mesa Reserve, Colorado; Washington Irrigation Company, reservoir, Uinta Forest Reserve, Utah; Colorado and Grand River Railroad Company, railroad, Medicine Bow Reserve, Colorado.

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## FOREST MANAGEMENT.

The following rules are being carried out in marking timber on the Allen Gold Mining Company sale of 50,000,000 feet in the Hell Gate Forest Reserve:

(1) Cut in alternate strips of 150 and 75 feet in width, respectively, varying the location of these strips to conform to the nature of the stand, the strips to run with the slope.

(2) Cut everything merchantable from the 150-foot strips.

(3) In the 75-foot strips leave groups of seed trees covering at least one-half the area of the strip and separated by openings running across the slope.

(4) Leave for seed, trees from 7 to 11 inches in diameter, inclusive, considering the ideal seed tree as a 10-inch tree. Trees of 12 inches and over are to be left for seed only when smaller trees are lacking.

(5) Leave for seed sound trees so far as possible, but remember that injured lodgepole decays slowly, and that it is far more important that the groups should be full than that they should consist of perfect trees.

(6) To state Rule 5 differently, cut from the groups everything that will make lagging, converter poles, or 10-inch stulls, except when the scarcity of other material makes the leaving of some stull trees necessary.

(7) All trees to be thrown and brush to be piled outside the groups. In no case need refuse larger than 6 inches in diameter be piled for burning.

Wherever possible, spruce should be favored in the reproduction as against lodgepole pine.



The forest is mainly a pure stand of lodgepole pine substantially even-aged but of various diameters. These rules do not apply to those portions of the stand where old trees are standing in the midst of even-aged younger growth, or where the condition of the forest makes scattered seed trees necessary.

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## DENDROLOGY.

### **Turpentining Before Lumbering.**

A number of lumber companies which have suffered heavy losses by windfall of boxed trees and by reduction of grade thru deep chipping have abandoned turpentining their pines before lumbering. The Kaul Lumber Company, of Birmingham, Ala., among others, is looking earnestly to the possible application of the improved method of chipping with which the Service has been recently experimenting in Florida, and has applied to the Service for information and advice.

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### **Forest Herbarium.**

The Service herbarium now includes specimens of most of the tree species indigenous to the United States. In order, however, to make it complete and of fullest use it is necessary to obtain specimens of the species still unrepresented, as well as duplicate specimens of the represented species from different parts of their range, so that as far as possible variant as well as typical characters may be illustrated.

The specimens on file have been gathered almost entirely by members of the Service. A circular of instructions and requests to field members of the Service is shortly to be issued as an aid to collecting specimens now lacking.

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### **Dead Wood and Seasoned Live Wood.**

A structural study of wood from "dead" trees has been undertaken for the purpose of finding a practical means of distinguishing such wood from seasoned or partly dried wood from live trees. Consumers of pole and tie timber are having difficulty in separating "dead" and "live" wood stock which is purposely or otherwise made up of dead and live timber. Moreover, for many purposes, the dead wood of some species is very inferior in durability and strength to the wood of live trees.

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### **Tree Seed Germination and Seed Coverings.**

The special influence which the protective covering of tree fruits and seeds have upon the germination of seeds is being carefully studied, microscopically and otherwise, in order that better directions may be given in the storage and planting of such seeds. Wide variation exists in the time and percentage of germination of seeds of the same species, tho they have similar coverings. A like variation exists between seeds of different species but with similar coverings. Their behavior under the same storage conditions is also strikingly variable, without apparent reason. It is expected that the investigation now under way will throw light upon the many practical difficulties connected with the handling and germination of tree seeds.

## Accessions to the Library—Compiled by the Librarian.

Members of the Service are urged to report their special needs to the Librarian of any literature required by their work.

### Forestry—General.

Le rôle des forêts au point de vue physique, économique et social. (The rôle of the forest from a physical, economic, and social point of view); P. Buffault. 1906. 121 p. (Rodez.)

### Forest Botany.

Flora of Colorado; P. A. Rydberg. 1906. 448 p. (Colorado agricultural experiment station, Fort Collins. Bulletin 100.)

Flora of the state of Washington; C. V. Piper. 1906. 637 p. Illus. (Smithsonian institution—U. S. national museum. Contributions from U. S. national herbarium, Vol. 11.)

### Historical.

Geschichtliche Entwicklung der Wirtschaft im südlichen Oberschwaben, insbesondere im Forstbezirk Baidt. (Historical development of forestry in southern Oberschwaben, especially in the forest district of Baidt); A. Bühler. 1903. 24 p. (C. Günther, Wailingen.)

### Educational.

The study of locality; C. Guillet. 1905. 8 p. Illus. (From Popular science monthly, N. Y., Dec., 1905.) Importance of obtaining all possible facts by studying a locality.

### Forest Management.

Chestnut in Connecticut and the improvement of the wood lot; A. F. Hawes. 1906. 41 p. Illus. (Connecticut agricultural experiment station, New Haven. Bulletin 154.)

Practical assistance to owners of woodlands. 1906. 2 p. (Maryland state board of forestry, Baltimore. Forestry leaflet No. 1.)

### Volume and Yield.

Hilfstafeln für Holzmassen-Aufnahmen. (Tables for reckoning the volume of wood); M. F. Kunze. Ed. 2. 33 p. (P. Parey, Berlin. M. 1.50.)

### Planting.

Farm wind-breaks and shelter belts, their formation and care; S. B. Green. 1906. 69 p. Illus. (Webb Publishing Co., St. Paul, Minn.)

Forest planting on coal lands in western Pennsylvania; S. N. Spring. 1906. 16 p. (Forest Service circular 41.)

Cottonwood (*Populus deltoides*); Forest Service. 1906. 3 p. (Forest planting leaflet 24.)

### Organization and Administration.

Bombay presidency—Forest department. Administration report of the forest circles in the Bombay presidency, including Sind, for the year 1904-5. 1906. 162 p. (Gov't central press, Bombay.)

Burma—Forest department. Reports on forest administration in Burma for the year 1904-5. 1906. 173 p. (Office of Sup't of government printing, Burma.)

Cape of Good Hope—Dep't of agriculture. Reports of the conservators of forests for 1905. 1906. 167 p. (Cape Town.)

Sudan—Woods and forests department. Annual report, 1905. 14 p. (Khartoum.)

### Forest Reserves.

Forest reserves in Idaho; F. A. Fenn. 1906. 6 p. Illus. (From the Critic, Idaho, Vol. 1, No. 3.)

Telephones and the forest reserves; Bristow Adams. 1906. 4 p. Illus. (In American telephone journal, N. Y., Vol. 14, No. 14.)

### Finance.

Waldwertrechnung und forstliche Statik des jährlich nachhaltigen Betriebes. (Forest valuation and finance under management for a sustained annual yield); H. Hönlinger. 1906. 126 p. (K. Fromme, Wien and Leipzig, M. 3.)



**Technology.**

- Die Härte des Holzes. (The hardness of wood); G. Janka. 1906. 32 p. Illus. (W. Frick, Wien.)
- Instructions to engineers of timber tests; W. K. Hatt. 1906. 55 p. Illus. (Forest Service circular 38.)

**Statistics.**

- Consumption of tan bark in 1905; H. M. Hale. 1906. 4 p. (Forest Service circular 42.)
- Cross-ties purchased by the steam railroads of the United States in 1905; H. M. Hale. 1906. 6 p. (Forest Service circular 43.)
- Wood used for pulp in 1905; H. M. Hale. 1906. 11 p. (Forest Service circular 44.)
- Wood used for distillation in 1905; H. M. Hale. 1906. 3 p. (Forest Service circular 50.)
- Wood used for veneer in 1905; H. M. Hale. 1906. 4 p. (Forest Service circular 51.)

**Forest Laws.**

- Les restrictions légales au droit de propriété forestière privée en France, en Allemagne, en Autriche-Hongrie et en Suisse. (The legal restrictions on the rights of private forestry in France, Germany, Austria-Hungary, and Switzerland); J. Madelin. 1905. 227 p. (A. Rousseau, Paris.)
- Maryland forest-fire laws and forest protection. 1906. 2 p. (Maryland state board of forestry, Baltimore. Forestry leaflet No. 2.)
- Forest laws of Maryland. 1906. 3 p. (Maryland state board of forestry, Baltimore. Forestry leaflet No. 3.)

**Proceedings of Associations.**

- Internationaler Verband der forstlichen Versuchsanstalten. Zeit-Einteilung, 5. Versammlung, 8-16. Sept., 1906, in Württemberg. (International association of forest experiment stations. Program, 5th meeting, Sept. 8-16, 1906, at Württemberg.) 3 p.

**Forest Enemies.****Forest Insects.**

- The brown-tail moth and how to control it; L. O. Howard. 1906. 22 p. Illus. (U. S. Dept. of Agriculture. Farmers' bulletin 264.)

**Diseases of Trees.**

- Tree root rot (*Armillaria mellea*). 1906. 3 p. Illus. (Great Britain—Board of agriculture and fisheries. Leaflet 174.)

**Fires.**

- Forest fires; A. Akerman. 1906. 24 p. (Massachusetts—State forest service, Boston. Bulletin 5.)

**Hail.**

- Die Hagelbeschädigungen in Württemberg während der 60 Jahre 1828-1887. (Damage done by hail in Württemberg from 1828 to 1887); A. Bühler. 1890. 200 p. (W. Kohlhammer, Stuttgart.) *Contents of interest.*—Chap. 5. Die Einfluss der Bedwaldung auf die Hagelhäufigkeit. (The influence of forests on the frequency of hail storms.)

**Irrigation.**

- Investigations of irrigation practise in Oregon; A. P. Stover. 1906. 30 p. (U. S. Dept. of Agriculture—Office of Experiment Stations. Circular 67.)

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**FOREST EXTENSION.****Watershed Studies.**

Reports on watershed studies in the Elkhorn and Helena reserves have been received from J. F. Bond. He finds that forest planting will not be advisable to benefit city watersheds in either reserve, since they are fairly well forested, and such small areas as occur are unimportant or are unfavorable for planting. He recommends, however, that intensive fire protection be given, that grazing

be restricted, and that no timber cutting be allowed except for local use on the watersheds of Basin Creek in the Helena Reserve and of McClellan and Beaver creeks in the Elkhorn.

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S. N. Spring, who has been conducting watershed studies on the Leadville and Sevier reserves, finds that while the general water supply for towns depending on reserve drainage basins is adequate, planting is much needed to improve the stream flow for irrigation purposes.

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#### **Rangers' Nurseries.**

Plans for nine rangers' nurseries in the Jemez Reserve have been submitted by F. J. Phillips. Most of the sites are at elevations of from 7,000 to 9,000 feet. The recommendations cover the preparation of the ground, seed collecting, and planting. Yellow pine, red and white fir, and Engelmann spruce are to be used.

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J. D. Guthrie has reported that there are few desirable sites for rangers' nurseries in the San Francisco Mountains and Grand Canyon (South) reserves. One site has been selected in the latter reserve and a small nursery established and two sites have been selected in the former.

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#### **Planting Stations.**

As noted in the November program, a promising watershed planting project has been found in the Pecos Reserve. Headquarters for a nursery and station will probably be established on Santa Fe Creek, about 6 miles from Santa Fe, on the Amanda Boardman ranch, which the president of the Santa Fe Water and Light Company has offered to purchase and place at the disposal of the Government for nursery purposes.

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About 50,000 seedlings from the Henninger's Flat nursery will be planted by rangers in the San Gabriel and San Bernardino reserves as soon as the rainy season begins. Rangers will receive about 1,500 trees each, with instructions for planting them in favorable situations in their districts. In this way the seedling output will be increased at slight expense and a large number of experimental plantations will be started thruout the reserves.

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Work on the new station building at the Halsey station is progressing rapidly. It is expected that the building, which is to be a 1½-story concrete block structure, will be completed during the winter.

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As part of the new record-keeping system for the planting stations a set of cards has been issued covering "seed sowing," "seedlings," "transplants," "field planting," "field plantations." The cards, which give a complete record



of nursery and planting operations, seedlings on hand, and condition of plantations, are to be filled out in duplicate on May 15 and November 1 each year. One set is to be sent to Washington and the other retained for the station files.

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### **Planting Plans.**

An examination of the lands of the Lehigh Coal and Navigation Company in Monroe, Carbon, and Schuylkill counties, Pa., has been completed by A. S. Peck. These comprize four separate tracts of about 60,000 acres and offer an interesting variety of forest conditions.

The Monroe County lands are held to protect the headwaters of the Lehigh River. Most of this region has been denuded of merchantable species, so that forest planting is necessary, and in order to make this practicable the fire danger must be reduced. The planting plan for about 1,100 acres in the vicinity of Tobyhanna, Pa., already submitted to the company, provides for the planting of Scotch pine, shortleaf pine, red pine, pitch pine, white pine, European larch, Norway spruce, tamarack, and red oak, with a view to demonstrating the best treatment for the remainder of the lands in this region. Its recommendations include a fire patrol, the clearing of fire lines, the use of old roads in fire fighting, and the building of a watch tower.

The Carbon County and Schuylkill County lands are naturally favorable for chestnut, red oak, European larch, and Scotch pine. The demand for timber of all sizes for use in the mines will make forest planting profitable, provided that fire is prevented. A report will be submitted later recommending planting for a small typical area capable of being protected from fire at slight expense. It will be advised that a forester be employed to have full charge of this tract and to assist the superintendent of the Monroe County lands, who has himself had some training in practical forestry.

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### **Special Studies.**

The study of tree planting in agricultural regions in California, in cooperation with the State, is practically completed. S. J. Flinham, who has been engaged in this work, is now preparing a report on eucalyptus planting, which is part of the general planting study, and before returning to Washington will secure the additional data needed for a report on planting on nonagricultural lands.

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## **FOREST PRODUCTS.**

### **Telephone Pole Treatments.**

A series of experiments are now in progress at Escanaba, Mich., to further test the open-tank method for treating telephone poles. Arborvitæ poles are now being tried to supplement last year's tests on chestnut and white cedar. An average penetration of three-fourths of an inch, with a maximum of over an inch, has already been secured on the arborvitæ.

Brush treatments with carbolineum and creosote are also being tried on the arborvitæ poles. At the completion of this series of tests these poles will be set in an experimental line for the purpose of obtaining comparative results.

### **Tamarack and Hemlock Tie Treatments.**

The Forest Service has recently been investigating the method of treating tamarack and hemlock ties used by the Chicago and Northwestern Railroad at its plant at Escanaba, Mich. A number of ties have been cut at various seasons of the year and allowed to season, and are now being treated in a series of experimental runs at the Escanaba plant. It has been found that green tamarack and hemlock weighing as much as 48 and 50 pounds per cubic foot can not be treated successfully, but that when the timber is seasoned to a weight of 38 to 42 pounds per cubic foot good results can be obtained. Both the Burnettizing and the Wellhouse processes have been used. The treated ties, together with seasoned untreated and green untreated ties, will later be placed in an experimental tract for comparative tests.

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### **Mine Prop Treatments.**

C. G. Crawford, after an inspecting trip to the mines of the Philadelphia and Reading Coal and Iron Company, reports highly encouraging progress in the experimental treatments which the company is carrying on to ascertain the best methods of handling and treating mine props. Tho the treated timbers have been in the mines only about four months their superiority is shown by the fact that they remain free from the decay which has attacked the untreated timber. Plans are now under way for the erection of a small commercial plant to test further the advisability of using treated timbers on a larger scale.

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### **Reserve Engineering.**

W. E. Herring, formerly connected with the Irrigation and Drainage Investigations of the Department of Agriculture, has been placed in charge of the Section of Reserve Engineering and will have general supervision of all engineering work on reserves done by private interests or by the Forest Service.

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### **Timber Tests.**

Tests to determine the relative strength of the various timbers on the reserves are in progress at the Service testing station at Seattle, Wash. The test material now on hand includes Alpine fir and Engelmann spruce from the Pecos Reserve, New Mexico; red fir and western yellow pine from the Pikes Peak Reserve, Colorado; Alpine fir, Engelmann spruce, and lodgepole pine from the Medicine Bow Reserve, Wyoming.

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J. B. Knapp, in charge of the Service timber-testing station at Eugene, Oreg., has accepted the directorship of the testing laboratory of the University of Oregon, where the testing station is located.

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During the past six months M. Cline has spent a month or more at each of the timber-testing laboratories, in order to bring the testing methods up to a uniform standard of efficiency.



## PUBLICATION AND EDUCATION.

The following addresses on forest subjects were delivered in November:

Northeastern Iowa Horticultural Society, Charles City, Iowa, November 20 to 22; H. P. Baker.

National Slack Cooperage Manufacturers' Association, Chicago, Ill., November 21; Findley Burns.

National Hickory Manufacturers' Association, Chicago, Ill., November 22; H. B. Holroyd.

University of Georgia (opening of course in forestry), Athens, Ga., November 27; Alfred Gaskill.

## RECORD.

### Supplies.

The Service has adopted a new system in the Section of Supplies by which greater promptness in filling requisitions is gained. By this system all blanks used in listing, invoicing, and back ordering the supplies called for are prepared at one writing, and articles in stock are packed for shipment at once, altho stored in different departments. It involves a slight change in the forms used by the Property Clerk for invoice and receipt. No change is made, however, in the forms used for invoicing and receipting for property transferred by one member of the Service to another or to the Property Clerk.

When articles on requisition are not in stock notice of the approximate date of shipment is sent to the member for whom the articles are ordered. The uncertainty in the time of delivery of supplies purchased and of blank forms makes it impracticable to give definitely in advance the date when articles will be shipped.

Invoices of property should be checked up immediately upon the receipt of the articles and notice given promptly of any apparent error in the shipment or in the invoice itself. Many of the packages containing supplies are shipped by mail, and delay in giving notice when articles are missing lessens the chance of their recovery from the mail. Promptness should also be used in returning receipts for nonexpendable property and in handling documents of any kind involving responsibility for property. The correctness of the property account depends largely upon the cooperation given by men in the field.

Receipts for nonexpendable property must be signed in person by the member to whose account the property is charged. The responsibility is strictly personal, and the signature of a member acting temporarily for another will not be accepted.

Since many of the articles called for in requisitions must be purchased it is essential that forest officers and other field members anticipate their needs as far as practicable. Many annoying delays, which are unavoidable if supplies are procured in small quantities and at frequent intervals thruout the year,

will be obviated if requisitions are made March 1 and September 1 for routine supplies needed during the ensuing six months, in accordance with the instructions printed on page 111 of "The Use Book."

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### **Photographic Laboratory.**

Rolls of films sent out from the Service are plainly marked with the date after which they should not be used because of deterioration, and members are expected to return them to the photographer at the date given, if unused. The observance of this rule will insure good results from exposures, and will also save the writing of letters calling for the return of the expired films.

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### **Mail.**

Postage stamps in payment of the registry fee must be affixed when official matter is sent by registered mail by one forest officer to another or to the Service at Washington. The penalty frank provided for official mail takes the place of the ordinary postage but not of the additional charge for registering. Reimbursement is made in the monthly expense account if the postmaster's receipt for the registered matter is submitted as voucher.

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Personal mail of all classes addressed to members of the Service is forwarded without the payment of additional postage if the postmaster at the forwarding office is informed that the address is changed by official orders, either by the use of a rubber stamp or by sending postal card Form 560.

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## **GRAZING.**

A. F. Potter, inspector of grazing, returned to Washington November 25. The grazing arrangements and authorizations for 1907 will be taken up and acted upon without delay.

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## **RESERVE ORGANIZATION.**

Telegraphic messages, unless paid for and submitted in monthly accounts, are not charged to the reserve authorization, but are paid from a general fund set aside for that purpose.

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After repeated requests to submit Form 99 with every expense account nearly 50 per cent of accounts are received from officers in charge without this form attached. This causes much unnecessary clerical work in the Washington office. A cost-keeping system by projects and lines of work is now in operation for all expenditures of the Forest Service, and it is necessary that this form accompany each Form 4 or Form A voucher, in order that the account can be properly apportioned among the different items.

To avoid delay in the payment of accounts this form, when omitted, has heretofore been made out in this office, but in the future the officer in charge



will be held strictly responsible, and every account received without Form 99 attached will be returned for correction.

It should be specially noted that transportation requests are not chargeable on Form 99, but are made the subject of a separate account under the allotment for "Travel."

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## RESERVE DISTRICTS.

### Northern.

The Ekalaka Reserve, Montana, established November 5, has been placed under administration, with Supervisor J. F. Smith, of the Black Hills Reserve, in charge, with headquarters at Deadwood, S. Dak.

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Supervisor Ira E. Todd, of the Little Belt Reserve, Montana, has assumed charge of the Snowy Mountains Reserve, Montana, created November 5, with headquarters at Neihart, Mont.

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The Big Hole Reserve, Montana, established November 5, is now under administration, with Supervisor J. B. Seely, of the Madison Reserve, in charge of the Southern Division, with headquarters at Sheridan, Mont., and Supervisor E. A. Sherman, of the Hell Gate and the Montana Division of the Bitter Root reserves, in charge of the northern portion, with headquarters at Missoula, Mont.

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The Sierra Madre Reserve, Wyoming, established November 5, has been placed under administration, with Supervisor L. G. Davis in charge, with headquarters at Saratoga, Wyo.

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The Crazy Mountains Reserve, in Montana, established August 10, has been placed under administration, with E. C. Russell, Forest Supervisor, of the Absaroka Division of the Yellowstone Reserve, in charge. The Supervisor's headquarters will be at Livingston, Mont.

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The Pryor Mountains Reserve, in Montana, established November 6, has been placed under administration, with W. H. Pearce, Forest Supervisor, of the Shoshone Division of the Yellowstone Reserve, in charge. The Supervisor's headquarters will be at Wapiti, Wyo.

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J. E. Burton and P. T. Coolidge, Technical Assistants, on the Bitter Root Reserve, in Idaho, and the Big Horn Reserve, in Wyoming, respectively, have been temporarily detailed to the Wyoming Division of the Medicine Bow Reserve. They will mark timber on the 165,000,000-foot sale to the Carbon Timber Company.

F. A. Fenn, Supervisor of the Payette and Sawtooth reserves, in Idaho, has been temporarily detailed to organization work, and will start the administration work of the Coeur d'Alene Reserve, established November 6.

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#### Western.

Arrangements have just been made to purchase a 60-foot 40-horsepower boat for the use of Supervisor Langille, of the Alaskan reserves. The irregularity of the country and the long coast line render this necessary for administration purposes. The boat will carry a crew of 2 men.

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W. B. Greeley, formerly Forest Inspector, has been transferred to the Office of Reserve Organization and made Supervisor of the Sierra Reserve (South), California, November 17, to replace Harrison White, resigned.

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R. H. Charlton, Forest Supervisor, of the San Gabriel and San Bernardino reserves, reports that the fire-breaks thru the chaparral have proved effective in stopping fires. On November 5 a large fire, carried toward the San Gabriel Reserve by a heavy wind, was stopt completely by a 40-foot fire line which had been thoroly cleaned and grubbed out.

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Robert J. Selkirk has been placed in charge of the newly created Huachuca Reserve, in Arizona, with headquarters at Patagonia.

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David Barnett has been appointed Ranger in Charge of the Charleston Reserve in southern Nevada, which has just been organized, in order to prevent timber stealing. To assist Mr. Barnett, Deputy Forest Supervisor D. S. Marshall has been temporarily transferred from the Uinta Forest Reserve, Utah.

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H. J. Brown, formerly Technical Assistant on the Sierra Reserve (North), has been sent to assist W. J. Weigle in marking timber on the Wyoming Division of the Medicine Bow Reserve.

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#### Southern.

F. S. Breen, Forest Supervisor of the Black Mesa, San Francisco Mountains, and Grand Canyon (South) reserves, Arizona, has been temporarily detailed to assist in the Office of Reserve Organization at Washington. T. S. Woolsey, Assistant Forest Inspector, will take charge of these reserves during his absence.

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On November 1 to 3 a joint Rangers' meeting was held at Monte Vista, Colo. F. C. Spencer, R. W. Shellabarger, and Eugene Williams, Forest Supervisors of the San Juan, Cochetopa and Wet Mountains, and San Isabel reserves, respectively, with rangers, attended. The following technical men were present: R. S. Kellogg, E. R. Hodson, H. S. Sackett, and John T. Wedemeyer.



A. W. Jensen, Forest Supervisor of the Manti Reserve, Utah, reports a very successful rangers' meeting at Ephraim, Utah, October 21 to 27. W. C. Clos, Inspector of Grazing, was present and took part in the discussions on grazing.

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Thirteen ranger stations have been established in the San Francisco Mountains Reserve, 18 in the Battlement Mesa, 38 in the Medicine Bow, 11 in the Montezuma, and 14 in the San Isabel.

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J. W. Farmer, Forest Supervisor of the Mount Graham Reserve, has been temporarily detailed to examine applications for lands in Arizona made under the act of June 11, 1906. H. A. E. Marshall will assume supervision of Supervisor Farmer's reserve during his absence.

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O. C. Snow, Forest Ranger in Charge of the La Sal Reserve, Utah, has made arrangements with the Blue Mountain Telephone and Electric Company by which, in consideration of 500 poles, the Service will be allowed free use of the telephone lines to be constructed between La Sal and Moab, with the additional privilege of attaching to this line at any point.





